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MODERN TRANSPORT

"THE TIMES" OF THE TRANSPORT WORLD

CENTENARY OF CARTER PATERSON BUSINESS

See Page 3

VOL. LXXXIII No. 2143 [*Registered at the G.P.O. as a newspaper*] LONDON, JUNE 11, 1960 PRICE ONE SHILLING

CURRENT TOPICS

Replacement of a "Queen"

IN his statement to stockholders a month ago Sir John Brocklebank, chairman of Cunard, revealed that "excellent work" by that company's design team had led to the conviction that ships of about 75,000 gross tons and a service speed of 30 knots could most satisfactorily replace the "Queens" on the North Atlantic. This view is confirmed by the Chandos Committee. It recommends such a ship, of 990 ft. in length overall, 114 ft. beam and 30 ft. 3 in. draught; she would carry 2,270 passengers and cost from £25 to £28 million. Cunard would contribute £12 million to serve as equity capital in a separate company, but would own and operate the ship. The Government would provide not more than £18 million as loan capital; this would bear interest at 4½ per cent from the date the ship enters service and would be redeemed by the operation of a 4½ per cent sinking fund over 25 years. If the gross yield of the Cunard equity should exceed an average of 7 per cent the excess would go to accelerating reduction of the Government loan. Similar loans on the present "Queens" were repaid well within the due dates. There is a proviso that if, from the beginning of the sixth year of service, the gross yield on Cunard's investment should fall below 3 per cent, then interest on the Government loan will be reduced by one-half per cent for each half per cent fall in any calendar year. Given Government sanction the keel could be laid within a year and the ship completed four years later, states the Cunard chairman.

Pipeline Progress

THROUGHOUT the world the laying of pipelines is destined to have a far-reaching effect on transport. Recently we recorded the decision of the European Transport Ministers' Conference to investigate the subject. Its significance in this country is indicated by the Esso Petroleum Company's application for Parliamentary powers to build pipelines from Fawley refinery to London Airport and Avonmouth. Already there is a 57-mile pipeline from the British Petroleum Company's terminal at Finant to the Grangemouth refinery; another, of 23 miles, is being laid from Partington to the Shell refinery at Stanlow. Latest to come into operation is the nine-mile pipeline from Walton-on-Thames under the river to London Airport. Certain military installations are also in use. The Esso company, whose proposal is meeting with some opposition, states that the demand for petroleum products is so great that either the rising demand must go unsatisfied or more tankers must be put on the over-burdened roads if the products cannot be pumped underground. Fuel for London Airport has at present to be shipped 225 miles from Fawley to Purfleet, then by river barge to Fulham and finally by road tanker to destination. Four tanker loads are needed to refuel a Boeing 707 jet airliner; jet fuels to be supplied this year are estimated at about 15 times as much as in 1957 and will have risen to 18 times by 1961. When installed the pipeline will cut the number of road tanker journeys from Fulham from 200 to 20 a day, with a consequent easing of road congestion. There is a growing concensus of opinion that what is destined to be an increasingly important and extensive means of transport should be subjected to a code of procedure protecting the rights of the individual on lines similar to those adopted in early railway legislation.

Collision at Borough Market Junction

ON the afternoon of January 28 last a double collision occurred at Borough Market Junction, London Bridge, Southern Region. A Hayes—Charing Cross electric train ran past a signal at danger and came into sidelong collision with a Hastings—Charing Cross diesel-electric; the collision forced the rear end of the leading coach of the Hayes train towards the down line from Charing Cross when it was struck by another train going to Tattenham Corner. Seven passengers were slightly injured and the evening services seriously affected. In his report on the accident Colonel D. McMullen, inspecting officer of railways, states that although it caused "vast inconvenience" the arrangements made for dealing with a very difficult situation were commendable; he congratulates those concerned in clearing the lines and repairing track and signalling so as to enable normal service resumption by 5.6 a.m. next day. "It is difficult," states the report, "to understand this case of human failure because the motorman was well acquainted with the route and had previously stopped trains on a great many occasions at the signal which he passed at danger; further, he was in good health and had good sight and was not fatigued. . . ." The circumstances have been made known to the Medical Research Council, which is assisting the B.T.C. in investigating failures of this nature. The motormen's practice of looking at the lie of the points when passing through busy junctions should not be to the detriment of the observance of signals, says the inspecting officer. As the overlaps beyond some of the signals are very short he recommends additional detonator placers to co-act with the signal aspects and thus avoid a collision resulting from an over-run; at the least, by reducing speed these would reduce also the severity of the collision.

B.R. Channel Islands Plans

PLANS to remodel the British Railways steamer services to the Channel Islands as from May, 1961, announced by the Southern Region, have as object the cutting down of heavy losses on the services and the raising of the standards of comfort for passengers, and have been submitted to the South Eastern Area Transport Users' Consultative Committee. If the Committee agrees a saving of more than £200,000 a year on the passenger services alone is expected. All the ships would be concentrated on the shortest sea route, that from Weymouth, which is only 75 per cent of the length of that from Southampton. Fewer, but bigger, ships would run the service; they would be one-class. Two new "super ferries" are being built, the first to be completed this autumn. These two ships, with the one modern ship already in service, will be able to sustain the entire service, in lieu of five or more vessels, and will carry as many passengers in greater comfort. Passengers from Southampton itself will be able to join the Waterloo—Weymouth Harbour boat train at Southampton Central, and the shorter voyages will mean little difference in the overall time for their journey. Freight which is at present carried on the passenger steamers between the Channel Islands and Southampton will be carried by British Railways cargo ships—two new modern ships have recently come into service—direct between the Channel Islands and Southampton.

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Some Quiet Publicity

THE reticence of the Rolls-Royce organisation has long been proverbial. Its advertising, while by no means meagre, is quiet and infers in a modest manner that the name is sufficient to confirm the excellence of a product. There has, however, been a definite widening of interests since the 1939-45 war and the making of a 25-minute film, *The Magic of a Name*, is intended to spread appreciation of this both outside and inside the organisation. Primarily it is intended for use in the field of public relations and sales promotion and foreign language versions are being prepared. That being so, we wondered whether the approach was not still rather too modest. More emphasis could justifiably have been laid, for example, upon the successful entry of Rolls-Royce diesel engines into the North American market. All in all, however, the film does cover a very wide field and most properly lays stress upon the importance of research in all fields of development pursued by the company. Made in colour by R.H.R. Productions, Limited, in association with the Film Producers Guild, 16-mm. and 35-mm. prints are available through Sound-Services, Limited, Wilton Crescent, London, S.W.19, to recognised organisations.

Vandalism on the Railways

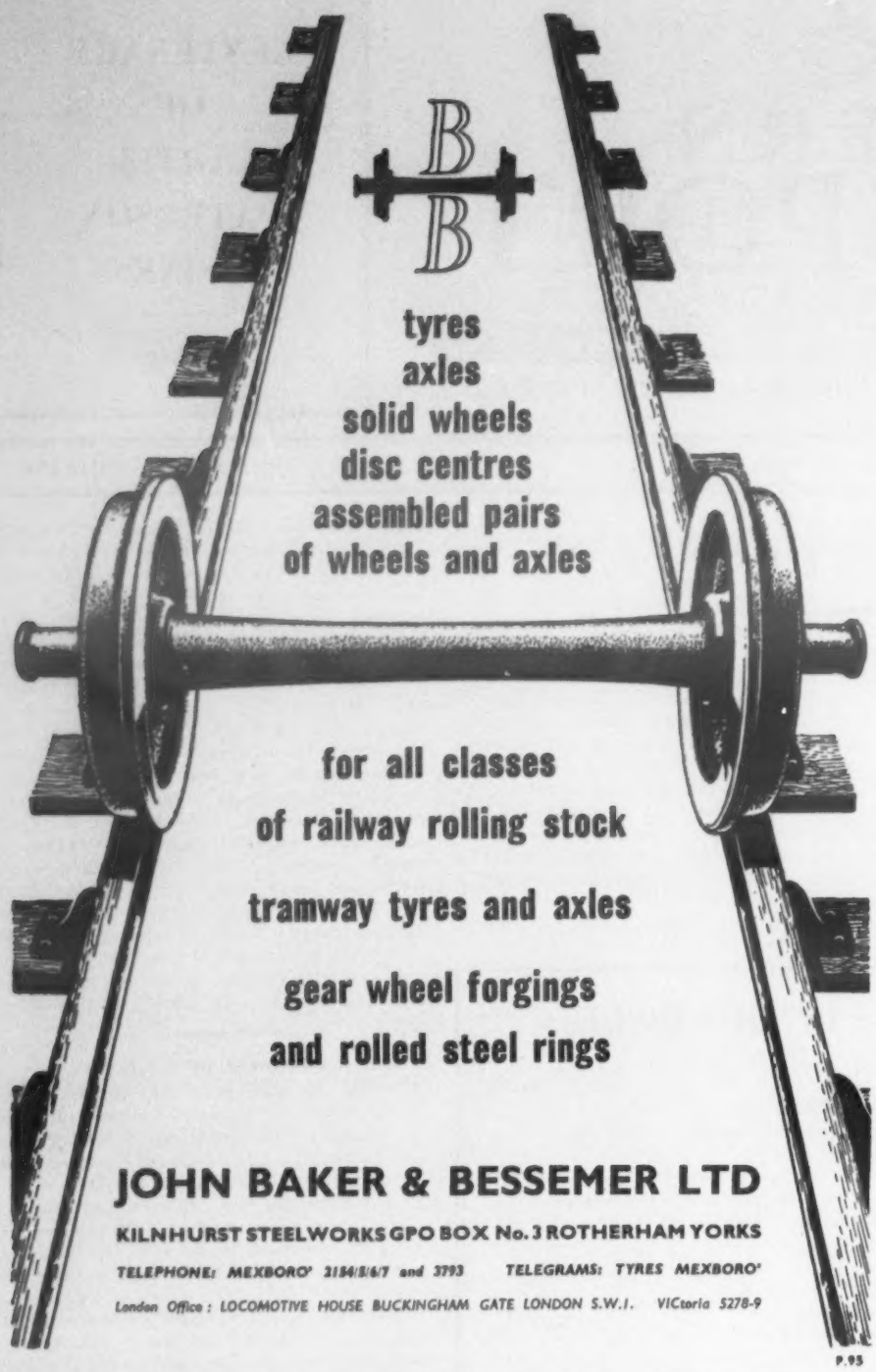
WILFUL damage to passenger coaches and other railway property by hooligans may cost British Railways about £500,000 this year if vandalism continues at the present rate. Extensive damage has been reported in all regions of British Railways and is inflicted mostly on excursion, late-night and weekend trains. There was £11,000 worth of deliberate damage to rolling stock on the Southern Region alone during the first three months of the year. During the same period, over 250 cases of vandalism occurred in the North Eastern Region where coach windows were broken, upholstery ripped and slashed, electric light fittings damaged and lavatory compartments wrecked. Nearly 140 similar cases were reported in the Scottish Region, and over 1,000 items of damage to coach fittings were recorded through the same period in the London area of the London Midland Region. The new Manchester—Bury electric stock has suffered severely from these outrages. Although most vandalism occurs in trains in service there have been many instances of wilful damage to trains in sidings. In Essex a number of brand-new passenger coaches were extensively damaged by stone-throwing while stored in sidings pending completion of the electrification of the London, Tilbury and Southend and the Chingford and Enfield lines. As a result seven schoolboys were convicted. Ambulance and fire fighting equipment has been damaged in the North Eastern Region; litter bins have been ripped from Clacton sets; leather cloth torn in Manchester-based diesels. Apart from wilful destruction in passenger coaches, vandals and hooligans have also interfered with the brakes of freight wagons, and have deliberately damaged fixed equipment and buildings. B.T.C. police and railway officials are making every effort to curb such activities and the Commission hopes that passengers and the general public will co-operate by reporting instances as quickly as possible.

Planned Economy by C.I.E.

FROM Monday next the suburban train service of Coras Iompair Eireann between Dublin, Bray and Greystones will be recast to a considerable extent in an endeavour to avoid the annual loss of over £130,000 on the line without impairing the facilities used by most of its travellers. In a letter addressed to them in the pamphlet setting out details of the new services and the revised fares, the general manager of C.I.E., Mr. Frank Lemass, explains that the scheme will enable the line to be operated with half the rolling stock required at present and that the annual mileage will be reduced by two-thirds. The complete closing of the halts at Salthill, Booterstown, Sydney Parade and Sandymount, and the calls by two trains only each way at Lansdowne Road will allow some acceleration of the service; a comparison with the timetable which is about to be replaced shows that there are savings averaging five to seven minutes for all-stations trains between Bray and Amiens Street, although even now these take roundly 38 min. to Tara Street and 40 min. for the through journey. This may be set against the 48 min. for the 45 bus taking the direct Dublin—Bray road. There is, in fact, more to be gained from intermediate stations, with 28 min. from Dalkey to Dublin by train against 41 min. by bus and 19 min. from Dun Laoghaire compared with 31 min. There will be no change in the ordinary fares or in the three-monthly ordinary returns, but day return fares which have been single fare and a third will be raised to single fare plus two-thirds. Unlimited weekly tickets will be roughly nine times the single fare, but there are also limited tickets at cheaper rates for one journey each weekday in each direction.

Increased Charges Announced in Ulster

FROM June 27 the Ulster Transport Authority is to increase its fares and freight rates by both rail and road services. It is the first time that the provisions of the 1958 Transport Act, whereby increased charges may be authorised temporarily, pending application to the Transport Tribunal, have been invoked. In announcing the increases last week the U.T.A. pointed out that they constituted the first rises in passenger fares for nearly three years and in freight rates for more than 18 months. They followed increases in costs of operation amounting to almost £500,000 annually and including wage increases recently granted, which would come to some £260,000 a year. In general terms season ticket rates will be increased by 7½ per cent and rates for the carriage of merchandise will be raised by the same amount. Single and return fares of 5d. or less will be increased by ½d. and those exceeding 5d. but less than 1s. 1d. will rise by 1d. Thereafter there will be increases of 2d. on fares of 1s. 1d. to 2s., of 3d. on those from 2s. 1d. to 5s., 4d. on fares from 5s. 1d. to 10s., 5d. on fares from 10s. 1d. to 15s., and 6d. on those above that level. Internal economies can no longer meet the full extent of increased costs and the U.T.A. seeks public support in its endeavour to make ends meet.

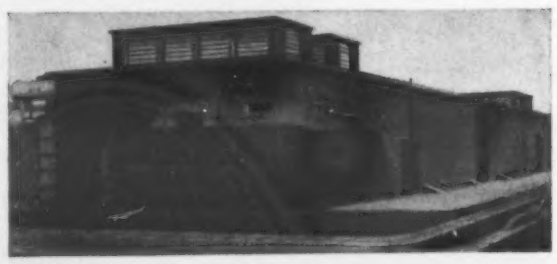


IN TRACTION SERVICE IN 18 COUNTRIES ... Hewittic RECTIFIERS

the converting plant used by the World's principal railways

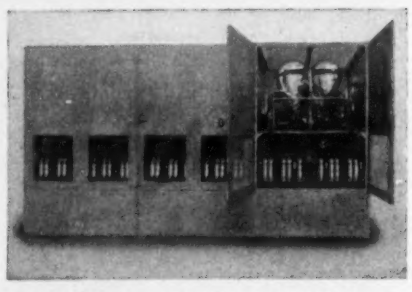
BRITISH RAILWAYS
SOUTHERN REGION

One of 28 substations equipped with Hewittic Rectifiers by the British Transport Commission for the Southern Region of British Railways. The photograph shows Wimbledon substation with one wall cut away to show the two 2,500 kW rectifiers in this half of the building.



LONDON TRANSPORT RAILWAYS

The 4,000 kW Bond Street substation, equipped exclusively with Hewittic Rectifiers. The plant comprises four 1,000 kW combined rectifier and enclosed air-cooled transformer units. This company is also responsible for the supply and installation of all A.C. and D.C. control gear. Some 90,000 kW Hewittic Rectifiers have been supplied to the London Transport Executive.



CANADIAN NATIONAL RAILWAYS

The electrified section of the Canadian National Railways, comprising some 70 track miles in the vicinity of Montreal Terminal is supplied with D.C. by Hewittic Rectifiers in two 3,000 kW substations at Central Station and Saraguay. The photograph shows one of the four 1,500 kW equipments in service. These are designed for operation at 3,000 volts, D.C.

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The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements. In controversial subjects relating to all aspects of transport and traffic this newspaper offers a platform for independent comment and debate, its object being to encourage the provision of all forms of transport in the best interests of the community.

Aluminium in Railway Rolling Stock

FIRST isolated in 1827, aluminium has been made commercially for just over a century, although production in 1855-56 probably totalled only 50 lb. in weight, with a correspondingly enhanced price. The Hall-Héroult process, by which it can be produced in quantity, dates from 1886; aluminium oxide is produced chemically from bauxite ore and is dissolved by a molten salt mixture in an electrolytic cell which runs continuously and consumes about 17,000 kW-hr. of electricity for each ton of aluminium produced. For this reason smelters are usually placed where cheap hydro-electric power is available. With a reduction in price to a competitive level aluminium consumption has soared spectacularly. The world output of aluminium ingot was about 7,000 tons in 1900, reached 720,000 tons in 1939 and is estimated to exceed 4½ million tons this year. British output of semi-manufactures runs at almost 350,000 tons a year, of which about one-fifth goes to road transport applications. Railway vehicles and shipbuilding each accounted for 1.5 per cent of the total in 1958, and there is obviously room for a considerable increase. This country is, nevertheless, well in the lead in use of aluminium in railway rolling stock, as the recent symposium of papers jointly arranged by the Institution of Locomotive Engineers and the Aluminium Development Association showed.

Britain in the Forefront

ATTRACTIVE properties of aluminium are its high resistance to atmospheric attack and other corrosion, its high electrical and thermal conductivities and its light weight—about one-third that of steel. Nonetheless, owing to its other physical properties, such as its lower elasticity, greater sections are needed in aluminium plate or beams to achieve equal rigidity and the net saving in weight may be of the order of only 50 per cent. In this country, moreover, there is a long tradition of comparatively lightweight construction for railway rolling stock; we have long turned out coaches in the 30-40 ton bracket which correspond to Continental coaches of 45 tons or more tare and to those of 70 tons and upwards in the United States. The long-standing interest in aluminium construction on railways in Britain is therefore the more remarkable. It goes back at least to 1905, when the former Lancashire and Yorkshire Railway used aluminium exterior panelling on some Southport electric stock which also had interior fittings of aluminium. Four years later South London line 6,600-volt wooden-framed carriages were built by the L.B.S.C.R. with roof, ends, sides and floors sheathed in aluminium. The Lancashire and Yorkshire Manchester—Bury coaches of 1916 comprised 66 remarkable all-metal vehicles with steel body framing on a steel underframe and commercially pure aluminium sheet for roof, end and side panels outside and for some inside panelling. Remarkably little corrosion took place during their life of over forty years. After this early and sound start progress in Britain was less notable, but has been distinguished in recent years by the 500 light alloy railcars built for British Railways at Derby and by the all-aluminium stock for the shallow lines of the London Transport Underground system; on the deep level lines considerable progress in aluminium panelling is being made on stock which, due to space considerations, has a steel underframe.

Value of Symposium

SOME of the salient features of the papers presented in the symposium have been brought out in the abstracts which appeared in MODERN TRANSPORT last week and are continued in this issue. Whether they dealt with design considerations or with experience with rolling stock in service there was a welcome new angle in the papers, since the majority of the previous contributions on the subject to the proceedings of learned bodies, however excellent, have been written and presented by engineers primarily interested in the manufacture and supply of either aluminium alloys or equipment associated with the manufacture and fabrication of aluminium structures. On this occasion the keynote was set by Mr. J. F. Thring, who, in a general review of design, began a down-to-earth assessment of pros and cons against the background of years of working with traditional materials. Railway engineers the world over are not given to easy conviction that designs and materials which have proved their worth can be cast aside in favour of a new venture, which, whilst having certain advantages, is almost certain to cost more in terms of hard-earned revenue. Hence the desire to examine all aspects of the subject with care before taking a costly plunge. In this regard the symposium was invaluable in placing data before those responsible for making decisions; it also enabled discussion on the values of graphical, algebraic, computer and scale-model aids to solution of design problems and the effect of features such as steel rivets in light alloy structures. In short there has been presented not only the credit side of the aluminium story but the practical ways in which "the disadvantages of price and deflection," as one speaker put it, can be overcome.

Future Prospects Favourable

WHAT are the future prospects for the use of aluminium in railway rolling stock? Assessment of economies, through reduced weight, as Mr. F. L. Stafford said, may sometimes require moderately complex analysis. "Such studies, however, seem certain to become more remunerative and to extend to an increasing range of services and of types of vehicle as the considerable revolution taking place in railways proceeds." Canadian experience indicates that rapid advances in welding techniques, the availability of new and versatile aluminium alloys, the testing of prototypes prior to mass production and the application of test data to design will move the industry from limited to large volume use of structural applications — aluminium is undoubtedly on the way to general acceptance as an ideal material for railway rolling stock, said Mr. R. A. Campbell. French experience shows remarkable resistance to accidental damage. In East Africa remarkable savings in fuel demonstrate clearly the economies of all-aluminium vehicles, particularly on steeply-graded routes. Although there have been some structural troubles with these vehicles they are mainly attributable to the coupler position; once that is overcome the future of aluminium construction on these railways is alluring. German and American experience is favourable; the satisfactory results at home in varied service are indicated in the abstracts we publish and must inevitably lead to intense interest being taken whether for coaches, wagons, containers or locomotive bodywork.

NEWS SUMMARY

REPORTING on how best to maintain Britain's express Atlantic passenger service, the Chandos Committee has recommended that the Government should lend the Cunard company £18 million towards the £30 million ship designed to replace *Queen Mary*. The Government is stated to have the matter under urgent consideration. (Editorial note on page 1.)

Details of the consortia bidding for the Tagus bridge contract appear on page 13.

Aer Lingus has resumed London—Shannon service and begun a new one between Dublin and Cherbourg. See page 11.

New breakdown crane types ordered for British Railways, of 75-ton and 30-ton capacity, are described on page 6.

The centenary of the establishment of the Carter Paterson parcel business falls this year; an account of the progress of the undertaking begins on page 3.

We deeply regret to record the death of Mr. Sidney B. Taylor, chief secretary, B.T.C., after an illness lasting several weeks. A portrait and biography appear on page 9.

The Channel Tunnel Parliamentary Group is urging the Minister of Transport to receive a deputation on the subject; it is understood that the Government does not think any part of the project should be a charge on Government funds and that means of avoiding this feature of the proposals are to be sought.

THE CARTER PATERSON STORY

Centenary of a Parcels Service

1—EARLY HISTORY AND AN AMALGAMATION

ONE hundred years ago this month the initial moves were being made in Manchester towards the formation of Carter Paterson and Company, and on November 1, 1860, it commenced trading. This was a name destined to occupy a place in the affections of Londoners rivalled, one likes to feel, only by that of the London General Omnibus Company, which indeed had been born only four years earlier and with which it was to share much in common as it developed. The first chapter of the Carter Paterson story is pretty well known—how James Paterson, in the Scots tradition, was turned out to find his own living, how he joined Pickfords at Newcastle and came to London in 1860 to buy, with Walter Carter and others, the established business of Mary Stanbury, the carrier, and her six carts and eight horses at George Yard, Aldermanbury, in the City of London.

Less is known of the situation of the London parcels carrying business at that time and without this the riskiness of the venture to which the young James Paterson was putting his hand (he was only about 30) cannot be appreciated. London in 1860, a much smaller place than it is today, was already well served by "parcels mail" as it was sometimes called, for in addition to the powerful Pickfords, which also acted as a railway agent, there was the master) at Alnwick and had therefore learned a good deal about railway working. His two brothers were also railwaymen and took no active part in the Carter Paterson business until the 1870s. These facts are worth recording if only because Carter Paterson accountancy methods, etc., appear to have owed little to railway practice.

The Partners

The first partners were James Paterson, his brothers John and Robert, and Walter Carter, a Manchester carrier and remover. (The Manchester business survives to this day as Walter Carter (Harrods), Limited, having been acquired by the famous London store in 1924.) The purchase price was £725, scraped together in the months following the initial meeting and—such was the competition encountered—the first six months yielded only 1s. 9d. profit, but five years later we read that Carter Paterson and Company is agent for all the main-line railway companies entering London and that a "London and Suburban Parcels Delivery" touched places as far removed as Hampstead and Brixton, Hammersmith and Blackheath. For a 7-lb. parcel up to 3 miles the charge was 4d.; over 3 miles it was 6d. Today the equivalent charge is 1s. 11d.

Most of the business was with the railways; the latter used their established agents for delivery within a 3- or 5-mile radius (the "Pink" and "Blue" boundaries), but Carter Paterson beyond that. A most important early trade customer for

Straker steam wagon, which took over Carter Paterson depot transfer journeys from horse teams about 1902; right, a Napier "West End delivery car" employed about the time of the 1914-18 war. It is finished in a bright blue livery

London Parcels Delivery Company and no doubt a host of similar carriers jostling for the trade that was to be had. But there was no parcels post; London had to wait until August 1, 1883, for this.

Originator of Parcels Service

The L.P.D. Company, formed in 1837 (three years before the Penny Post), was the creator of the first London parcels service, and as such its origins cannot pass unrecorded in this context. Hitherto, trade had been done mostly by local carriers exchanging traffic through the medium of a booking office, often an inn. It fell to L.P.D. to inaugurate the idea of a central depot and radial services, within the area of the then 2d. post, i.e. three miles around the General Post Office.

To attract custom, shopkeepers were appointed agents and the customary booking fee of 2d. per parcel was abolished (Carter Paterson copied this move). The first headquarters was in Pickett Street, Strand (on the site of the Law Courts) but a move was soon made to Rolls Buildings, off Fetter Lane. One of the strengths of the company from the outset was that anyone joining, be he only a carter, had to invest £10 as capital. Undoubted success attended it; Dickens paid a visit to Rolls Buildings at Christmas, 1863, and described the hectic scene.

In those early days agents were an all-important source of business—one of the biggest, it is recorded, was a City coffee shop. Digressing here, it is worth recording that Carter Paterson London agents—most of them shopkeepers in the little streets—have remained part of the scene until the present time. Most of us can remember the green and red enamelled sign propped against the shop-front. Their function, evolved in an era when the telephone was still an undreamed-of luxury, was and is to compile lists of private addresses from which "Carter" is to collect parcels.

Coal gas operation in the 1914-18 period—the wooden cylinder encloses a rubber gas bag. During the 1939-45 war Carter Paterson again turned to fuel substitutes, producer gas (vehicle mounted or trailer units) and roof-top collapsible containers for town gas

Early Developments

By the turn of the century L.P.D. was established as far afield as Richmond and Deptford and its distinctive two-wheeled carts, with boy guard standing on the rear "monkey board," parcels stowed inside the body, trunks and so forth on top, were a common sight. Other things for which the company could claim credit were C.O.D. traffic, accepted from the start, and holiday luggage in advance, which it started at the suggestion of the South Eastern Railway general manager. It is also supposed to have been the first to think of a double-sided sorting platform, although it never constructed one.

In 1860, therefore, the newcomer faced formidable odds, but James Paterson sought fresh fields, or nearly so—the largely untapped outer London suburbs—in addition to the inner London area in which Pickfords was strongly entrenched. Since 1848 or thereabouts, when the emergent York, Newcastle and Berwick Railway had put an end to Pickford's wagon service between York and Scotland, in connection with which he had been employed, Paterson had been a clerk (or station-

the company was the Civil Service Supply Association. This was established in a very modest way by some G.P.O. staff in Queen Victoria Street in 1864 and it was a means by which Carter Paterson vans found their way into many residential thoroughfares, whence parcels might be collected for the return load. It was not long, therefore, before the new carrier was treading on the toes of the established L.P.D. company, so much so that by the 1880s it was not uncommon for rival drivers to be found fighting one another in suburban streets for the privilege of answering a window card and earning the 1d. commission. The early Carter Paterson "window card," incidentally, was a simple white affair, but it was to blossom into a familiar green with white letters and red border. It was already famed when Strube depicted an unhappy Ramsay MacDonald hanging one in the window of No. 10 Downing Street; in the following year Mrs. Baldwin was reported as having the same idea in mind.

In 1870 or the following year a lease was taken of the site of a former rope and timber yard in Goswell Road. This soon became the head office and rail freight depot—functions which it retained until it was vacated by British Road Services only last month. About this time the first suburban depots are recorded, at Chalk Farm, Chelsea, Camberwell and Stratford. However, the first central transfer depot for London parcels traffic was not secured until 1890 when the Central Street premises, adjacent to Goswell Road, were opened. It is recorded that such chaos ensued on the double-sided platform on the first day that it was promptly closed for three months while the staff devised a working plan.

Consolidation and Competition

Formation of a limited company in 1887, with James Paterson as chairman, ushered in a period of consolidation for Carter Paterson but intensified competition with its three rivals. To Pickfords and the L.P.D. company was now added Bean and Company's Express, formed in the same year as Carter Paterson and now beginning to make its presence felt. Its early history had been one of vicissitude. From Edward Bean and Company, at Nelson Terrace, City Road, it progressed through more than one change of name. Specialising in the drapery trade, at one period it ran five deliveries daily to the West End. In 1882 it concluded what is supposed to be the first formal hire contract, for one van, man and boy, with Cook Son and Company of St. Pauls, and later the first Post Office parcels motor van was supplied by Bean's Express.

Edward Bean died in 1878 and not long after there occurred the first of what was to prove a fascinating chain of events linking the fortunes of the London parcels companies and the figures responsible for them. James Paterson did not survive long after he had assumed the chairmanship; Walter Carter succeeded him and made John James Paterson, son of the founder, general manager.

(*Continued on page 9*)

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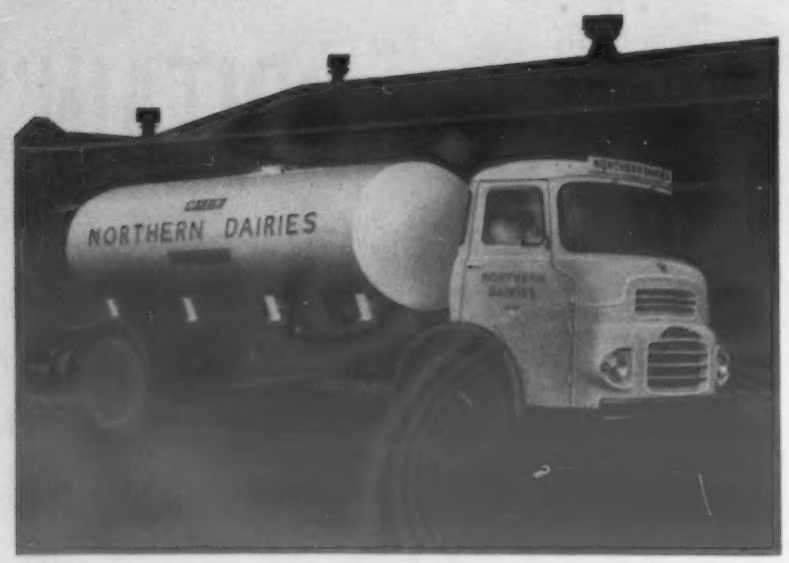

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LORRY—BUS—COACH

Improper Use of Small Bus

A FINE of £6 6s. and costs was imposed at Maryport (Cumberland) on Ian Logan, a local taxicab proprietor, who was alleged to have run an unlicensed bus service carrying people from work at a local footwear factory. Mr. G. N. Worthington, prosecuting for the Ministry of Transport, said that Logan had used a small bus as a public service vehicle without a public service licence or road service licence. He had been carrying 11 passengers who paid him 2s. 6d. a week. The defendant had been told on previous occasions that he could use his vehicle only for contract work, such as outings. The offence was extremely serious, as Logan was taking passengers who would otherwise use authorised bus services. Mr. Worthington said that people must be stopped operating these "pirate" services. The defendant stated that he thought his action was legal.

Bus on the Pier

THE Dover Harbour Board has inaugurated a bus service on its 1,300-yd. Prince of Wales Pier, as an amenity to help holidaymakers, local residents and fishermen. The 16-seater operates to the lighthouse around which the Board has opened a cafe and circular sun lounge. The fare is 3d.

New Charles Alexander Premises

NEW Aberdeen headquarters for Charles Alexander and Partners (Transport), Limited, were opened by Sir John Ure Primrose, chairman of the White Fish Authority. Situated in Old Ford Road, the site of the former depot, they have been designed to provide most modern and efficient road transport facilities. The conception, planning and layout, it is stated, were based on work study investigations to give maximum efficiency with minimum effort. The ground floor foyer gives access to a group of offices so arranged as to allow excellent daylight working. The communications office on the ground floor includes a Telex link with branches. The traffic office occupies one wing. Its layout is such as to ensure that all work progresses from start to finish with a minimum of lost time or effort. The first floor, reached by an open tread staircase, has the administrative offices, private offices and boardroom. The garage area has also been organised to give through flow of traffic.

Speaking at the opening ceremony, Sir John Ure Primrose said that the fishing industry owed much to Charles Alexander and his transport undertaking and that this latest expansion was in keeping with the excellent services provided by the company. Founded in 1926 with one vehicle, the Charles Alexander business now operates a fleet running over seven million miles a year, with depots in various parts of the country. Special attention has always been given to fish transport.

Interior of a J. Lyons tray delivery van with Warerite plastics interior walls for hygiene (see May 7 issue); right, Seddon battery-electric for Westminster City Council, which installed B.T.H. electrical equipment removed from an older vehicle

B.R.S. Clerical Claim Turned Down

A CLAIM by salaried staff of British Road Services for a 38-hour five-day week has met with refusal from the management in the National Joint Negotiating Committee. The rejection was based on two factors, the financial aspect and the operating difficulties which would arise from a five-day week. The unions representing this section of the staff are to refer the matter back to their executive committees.

Midland Fares Proposals

THE Birmingham and Midland Motor Omnibus Co., Limited, has decided that, in view of the recent increase in wages for its staffs and a reduction in the working week without loss of pay, which will cost the company approximately £650,000 per annum, it will seek authority to raise certain sub-standard fares to the mileage scale in respect of urban fares used on the occasion of the last application, and also a further scale in respect of rural fares. Increases are sought in respect of those single and scholars' return fares which at present are below the scales. A great many fares will remain unchanged, the company points out.

For Want of Evidence

AT a sitting at Newcastle upon Tyne the Northern area Licensing Authority refused an application by P. G. Walton, Limited, haulage contractor, Gateshead, for a variation of its A-licence by the addition of five vehicles subject to surrender of a Contract A-licence. It was explained that the applicant was carrying goods for the Consett Iron Co., Limited, and wanted in future to operate an open licence which would allow carriage of goods for other firms on return journeys. Mr. T. H. Campbell Wardlaw, for the applicant, said that last June Consett Iron announced that there would be a 20 per cent reduction in rates paid to haulage firms working for it. The applicant had to accept this reduction or cease to work for the Consett firm which was its best customer. Other firms from outside the northern area working for the Consett company were being granted permission by other traffic authorities to carry other goods. The Consett works were being greatly extended, and this increased production was being carried by firms licensed outside the Northern traffic area and Mr. Wardlaw said that North-East firms should share in the increased business. The application was opposed by Mr. I. Robey, on behalf of British Railways and British Road Services. He said he appreciated the difficult position of P. G. Walton and added that the solution might be to keep the Consett works so short of vehicles that it would have to appear before the Northern Licensing Authority. Refusing the application, Mr. J. A. T. Hanlon said the application was made because a contract with the Consett company had become uneconomic. The customer was not represented at the inquiry and Mr. Hanlon said he was therefore not aware of that company's problems. Licences were commonly granted on evidence of need, and as no one had come forward to give that evidence, the licence could not be granted.

Clearing House Operator Gaoled

AT Leeds Quarter Sessions recently a Bradford haulage contractor, Kenneth Francis Smith, of Silverhill Road, Bradford, was sent to prison for a total of two years after pleading guilty to five charges of obtaining credit when an undischarged bankrupt and of obtaining credit by fraud when an undischarged bankrupt. He also asked for 50 cases of obtaining credit as an undischarged bankrupt and 72 of obtaining credit by fraud and as an undischarged bankrupt to be considered. Mr. Gilbert Gray, prosecuting, said that Smith was adjudged bankrupt in Bradford in 1945, the amount involved being £499. Early last year he set up a transport clearing house business in East Street, Leeds, under the name of K. Smith and Company. He had no vehicles of his own, but obtained large contracts to move considerable quantities of goods, usually sugar, and sub-let them to various small haulage firms. When Smith tendered he put in competitive prices and got a great deal of work; he then offered attractive prices to the haulage companies. The fact that he was doing work at a small rate and offering to pay a large one must have been criminal in intent and went on so long as to poison the whole of the commercial life as far as road haulage was concerned in the vicinity. The case came to light as a result of a complaint from the Road Haulage Association. Mr. H. C. Beaumont, for Smith, said the business was an honest endeavour in the beginning and the charges were due to incompetence rather than dishonesty. It must have been apparent later that he had no chance of meeting his debt. Smith was now earning £18 a week as an engineer in a bakery, and if given a chance would pay £10 a week to his creditors. Passing sentence, the Recorder, Mr. Geoffrey Veale, Q.C., said Smith was a man who had been to prison in the past for fraud. He added: "I accept when you started this business you tried to operate it honestly, but within a very short time it must have been quite clear to you that you were trading in what can only be described as a flagrantly dishonest way."

P.V.O.A. and Jack Committee

THE P.V.O.A. is eagerly awaiting the report, due within the next few months, of the Jack Committee on rural bus services, to see whether the practical recommendations put forward in its memorandum have been adopted. These included a repeal or a substantial reduction of the present pernicious fuel tax; equitable conditions for all who operate passenger carrying vehicles; more positive action to enforce the law in respect of use of 10 to 12 seaters and private cars; amendment of the Act relating to the powers of objection by the Railways: and greater flexibility in the procedure for amendment of fares. Approval has been given by the Association to proposals discussed over many years which would have the effect of making British Summertime permanent. It would generally help if the period for relaxation and travel was extended by British Summertime being fixed always to include Easter and to continue until the third Sunday in October. The report of a special committee set up by the Board of Trade to review the problem of extending the summer holiday season is awaited. It is anticipated that the report will make recommendations not only to relieve congestion at the peak holiday period, but possibly to consider transferring the existing August Bank Holiday period to some time in September.

Bus and Coach Developments

M. David, Pontycymmer, applies for the licences of Walter Carpenter and Son.

S. H. Bateman, Limited, Shaw, seeks the excursions and tours of A. B. and H. Johnson from Delph.

London Transport on June 8 diverted Route 59A between Kennington Church and Lambeth Bridge via the Oval, Vauxhall Cross and Albert Embankment.

Midland General Omnibus Co., Limited, proposes a new service in Ilkeston between Market Place and the junction of Green Lane and Greenwood Avenue, via South Street and Park Road. It would operate on Mondays to Fridays.

Maidstone and District Motor Services, Limited, proposes to reorganise its local services at Tonbridge and to introduce a new service (136) between Tonbridge (Barden Park) and Hildenborough (Brookmead Estate).

Southdown Motor Services, Limited, applies for a new summer service between Brighton and Devil's Dyke Hotel via Patcham, Pyecombe and Poynings. It would be an extension of 102, formerly Ferring—Worthing—Shoreham, which would become Goring—Worthing—Shoreham—Brighton.

Lancashire United Transport and Salford City Transport propose a joint service between Farnworth and Glazebrook. If approved the licence for the L.U.T. Higher Irlam—Glazebrook service would be surrendered. It is also proposed that the company's Farnworth—Hollins Green route should become joint with the Salford undertaking.

ALUMINIUM IN RAILWAY ROLLING STOCK

*Symposium Papers—2**

IN his paper on British Railways experience with light alloy railcars, Mr. A. E. Robson, chief mechanical and electrical engineer, London Midland Region, referred to use of aluminium on the timber-framed bodies of Lancashire and Yorkshire (1905) and London, Brighton and South Coast (1909) electric coaches, both mounted on steel underframes. In 1916 the Lancashire and Yorkshire Railway built 66 all-metal electric coaches for the Manchester—Bury service; steel body framing was riveted to a steel underframe and commercially pure aluminium sheets were used for roofs, end and side panels outside and for side panels inside below the waist rail. Aluminium was used for many internal fittings from door handles to ventilator grills. These cars lasted 43 years with little trouble apart from slight corrosion where aluminium was in contact with the steel structure at a point where the paintwork had deteriorated.

On the other hand, later experiments with anodised carriage details exposed to atmospheric or other sources of corrosion and with alloy buffers had not proved satisfactory. But the adoption of light alloy construction for the diesel railcars designed for British Railways by the London Midland Region in 1952 and which entered service in 1954 had been most encouraging; since then railcars of basically similar design had been produced at Derby until at the end of 1960 there would be 550 such cars, compared with 3,000 of steel construction.

Design Modifications

The first railcars used light alloy rivets throughout, and soon after going into service the main points of the crossbars, headstocks and end diagonal members began to give trouble not from rivet shearing, as might have been expected, but due to rivet heads "popping" off. Investigation disclosed that one cause of this could be avoided by altered procedure in lifting vehicles for maintenance purposes. It also became apparent that buffing shocks at even fairly low speeds could cause extensive underframe damage to the headstocks and often to the solebars as far back as the bogie centres as each preceding joint collapsed. The incidence of damage of this kind was almost three times as great for the light alloy design as for mild steel railcars. Door binding sometimes occurred through excessive deflection and this was cured by extending the stiffeners below the doorways, the length of which was originally curtailed by the placing of the sanding gear, found to be unnecessary in service.

Good panel conditions will continue indefinitely if the paintwork is maintained in sound condition. Where concealed parts of the frame and body have had bitumastic or sprayed asbestos covering applied during construction the metal has been found in excellent condition, but when difficulty of access has prevented surface protection being carried out, some signs of corrosion can be seen after only three years' service. Such unprotected parts of the underframe are particularly vulnerable on vehicles working in coastal districts. All interior fittings, which are anodised, are in good condition after up to six years in service and have required no renovation.

Economics

It is not easy to assess accurately the economics of using light alloy instead of steel for railcar construction. Clearly for a given working schedule the lower weight of a light alloy railcar must result in less fuel cost, and it is reasonable to expect that there will be less expenditure in repairing corrosion damage during the life of the vehicle. But, under each head, just how much less? Again, on the debit side it cannot be disputed that, at present price levels, light alloy construction is more expensive than steel, but exactly how much more? Precise answers cannot yet be given.

It was only by using light alloy that railcars of sufficiently lively performance could be designed at all within the limitation of loading gauge and available engine power to meet the operating requirement of the original Leeds—Bradford service. Loading gauge remains as a limitation but there is a much greater freedom of choice of power equipment. On subsequent light alloy railcars, two engines of 150 b.h.p. (instead of 125 b.h.p.) have been fitted, and two of 180 b.h.p. can be accommodated within an underframe length of 57 ft. although this has only been done for vehicles of steel construction. The availability of even larger engines, at present up to 238 b.h.p. unsupercharged, has made possible the development of railcars with longer (63 ft. 6 in.) underframes of steel, with correspondingly greater passenger capacity. Care then has to be taken that the limit of adhesion is not approached under indifferent rail conditions. For steel vehicles fitted with 238 b.h.p. engines the adhesion factor may be 31 per cent.

Weight Reduction and Fuel

There is difficulty in making really true comparisons as between light alloy and steel because of the problem of finding vehicles of each type which are like for like in design concept. Weight saving directly attributable to the use of light alloy is, therefore, arguable, but probably about two tons on an underframe length of 57 ft. is the most that can be expected. In terms of the body-underframe unit alone this may be 30 per cent less than the weight of a comparable steel design, an impressive reduction. However, in relation to the tare weight of a complete power car, and after all that is what matters, the saving is hardly 7 per cent, a much less significant amount.

Other things being equal, a light alloy railcar can either provide a slightly better performance than a steel one over the same route or it can accomplish the journey to the same schedule on less fuel. At Newton Heath (L.M. Region) and South Gosforth (N.E. Region) there are light alloy and steel railcars operating on similar workings, and the records show that there is a saving in fuel with light alloy railcars of 8.5 per cent at Newton Heath and of 6.5 per cent at South Gosforth. Closely controlled tests, especially in relation to driving technique, would be necessary to establish a true figure. However, assuming a mean fuel saving of 7.5 per cent, or, say, 0.024 gallon per mile per twin-car set, then with fuel oil at 1s. 2.125d. per gallon the monetary saving would be in the order of £14 for each 10,000 twin-car miles in service. This excludes other charges, such as lubricants, which might justifiably be claimed in association with reduced fuel consumption.

Body Maintenance

In addition to the saving in fuel costs there should be savings in vehicle maintenance if light alloy body panels, properly protected, continue to be as resistant to corrosion as experience to date indicates they will be. By extensive experience of maintaining steel coaches it has been established that whereas underframes are virtually corrosion free, body panels require periodic repairs on account of corrosion and a complete re-panelling of the body may also be necessary once during the life of the vehicle. Spread over 30 years the cost of all this work does not average more than about £35 per vehicle per annum and this represents the upper limit of saving which light alloy could achieve even if it suffered no deterioration itself due to corrosion. However, relatively cheap design modifications to steel construction are in course of adoption which are expected considerably to reduce deterioration of steel panels by corrosion, and to the extent that these are successful, so the scope for savings by the use of light alloy is reduced.

It may be concluded then that light alloy gives very good service in railway carriage structures provided adequate surface protection is given against corrosive atmospheres. For external protection an anodised finish is not sufficient, at any rate for surface lines of British Railways. Light alloy is not suitable for applications involving shock loading such as buffers, or abrasion such as gangway facings. To give adequate shock protecion, headstock assemblies should be of steel. The weight of an aluminium alloy integral body-structure may be about 30 per cent less than a comparable design in steel. The lighter weight also means lower train resistance and consequently lower fuel consumption. This would save approximately £14 per 10,000 twin-car miles per annum. Maintenance costs in respect of atmospheric corrosion are lower with light alloy than with steel structures but experience would not put the value of this to British Railways as higher than about £35 per vehicle per annum. The cost of material only for the light alloy structure of railcars of the type discussed is approximately £1,100 more than for its all-steel counterpart. Thus to break even on material costs alone the operating mileage must be not less than 65,000 miles per vehicle per annum, based on present-day fuel costs. In services where power-weight ratio is particularly important and choice of power equipment is limited, the use of aluminium alloy can be commercially useful by helping to provide a livelier performance.

Mr. F. L. Stafford, in his paper "Assessment of Economics Obtained with Lightweight Rolling Stock," gave a large number of instances of savings through aluminium alloy stock in various circumstances and concluded that although assessment of economics required moderately complex analysis such studies seemed certain to become remunerative as the revolution taking place on railways proceeded.

Canada and France

Operating experience in Canada was dealt with by Mr. R. A. Campbell, manager, Development Division, Transportation, Aluminium Company of Canada, Limited, who is also a director of the Roberval and Saguenay Railway. He gave a list of applications to several thousand vehicles totalling a use of 9,361 tons of aluminium. Striking applications are 30 welded aluminium 80-ton hopper cars on the Roberval and Saguenay Railway; a 70-ton hopper with aluminium body and riveted construction in which 6,500 lb. of aluminium saved tare weight to the extent of 12,000 lb.; and over 8,000 roofs for box cars. Since 1945 over 2,000 tons of aluminium has gone into refrigerator car applications. In 1958 the Canadian National Railways began tests on five prototype aluminium freight wagons which showed that impacts of up to one million pounds could be withstood without damage and that at least 10 per cent further reduction in tare weight could be made.

French experience was conveyed in a paper by M. Dupré; it centres mainly upon fittings incorporated in steel stock. The large-scale use of aluminium is confined on the freight side to private owners' wagons, but includes special vehicles for such diverse traffics as ground nuts, salt, sulphur, bananas, phosphates and alumina.

East Africa

Mr. J. Hudson, chief mechanical engineer, East African Railways and Harbours, dealing with East Africa, showed by a comparative gradient profile the immense importance of reduced tare weight to his undertaking, with long, unrelieved banks at 1 in 66, and 7,700 ft. and 9,130 ft. principal summits. The 33 all-aluminium first-class coaches save about 4½ tons tare over steel cars; on the 1 in 66 the average oil fuel consumption is about 0.03 gal. per ton-mile, so that a train including six lightweight coaches would achieve a saving of 0.81 gallons per mile. On the 330-mile run between Mombasa and Nairobi where many of the coaches operate, it is assessed that an average of approximately 250 miles is on a grade of about 1 in 66, and the saving per trip is, therefore, 202 gallons; at 365 trips per annum the saving per annum per train would be 73,600 gallons, which at the ruling price of fuel oil amounts to £1,650, or about 9 per cent of the extra capital cost. The railway also has a twin-unit dining car and some aluminium-plated wagons. As an alternative an extra sleeping car can be added to trains, giving £64 extra revenue, say, between Mombasa and Nairobi, or perhaps an 11 per cent return.

Some difficulties with cracking at the canopy ends, tracked down to the low-level coupler position for metre-gauge stock, were detailed. Stiffening is being applied, but it is also apparent from the dining end of the twin car that centre doors in lieu of end doors, resulting in a stiffer end structure, would have avoided the trouble. When the high-level coupler position is introduced

(*Continued on page* 10)

* Abstracts of 13 papers presented in a symposium organised jointly by the Institution of Locomotive Engineers and the Aluminium Development Association. First portion appeared June 4.

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BREAKDOWN CRANES FOR B.R.

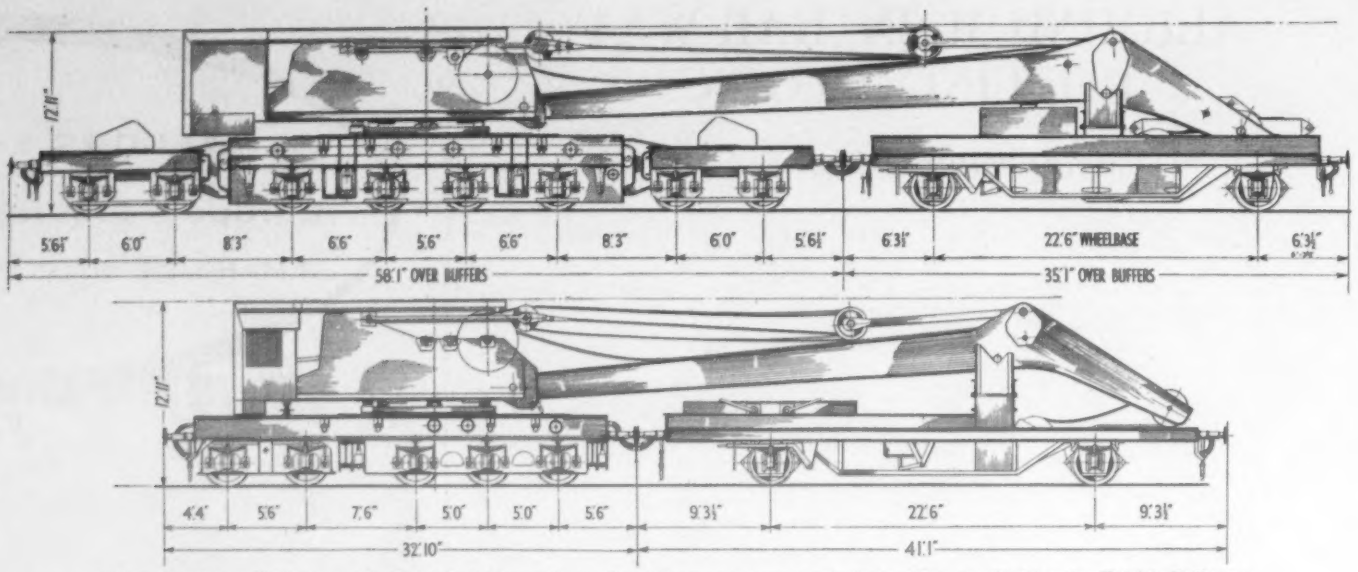
Orders for 12 75-Ton and 10 30-Ton Units

AS part of the railway modernisation programme the British Transport Commission has ordered 22 railway travelling breakdown cranes for British Railways. They are needed for lifting heavy modern equipment, including electric or diesel locomotives, in emergencies. Of them 12 are of a new 75-ton type for use on main lines; these have a greater lifting capacity than any other type of railway breakdown crane in Britain. The remainder are capable of lifting up to 30 tons in weight, and have been designed to work on both main and branch lines. Four of the cranes, two of each capacity, are driven by diesel engines with hydraulic transmissions and are the first diesel-powered breakdown cranes to be built for use in this country. The rest have conventional steam engines. Separate diesel-driven generators are fitted which supply electric power for floodlights and power tools. The first of the new cranes is expected to be delivered at the end of this year.

Self-Travelling Types

All the cranes are of the self-travelling type, able to move at slow speeds under their own power, and are capable of lifting, slewing and derricking operations. They have separate haulage winches for dragging aside debris, and the 75-ton type has an auxiliary hoist unit for lifts of up to 10 tons. The cranes are supplied with outriggers and jacks for use when lifting heavy loads or when working at extended radii. Match wagons are provided to support the jib when travelling in train formation between locations and roller-bearing axleboxes enable speeds of up to 60 m.p.h. to be sustained.

The 30-ton type is mounted on a five-axle undercarriage; three of the axles are mounted on the main undercarriage frame and two are mounted in a bogie pivoted at one end of the frame. When the crane is moved under its own power, two centre axles are driven through a train of gears; these can be disengaged when the crane is to be hauled by a locomotive.



Side elevations of 75-ton and (below) 30-ton railway breakdown cranes to be built by Cowans, Sheldon for British Railways

The 75-ton type has a four-axle undercarriage with two axles driven by a train of gears as in the 30-ton cranes; detachable four-wheeled load-relieving bogies are used at each end when travelling in train formation to reduce the axle loads.

The 22 cranes are being designed and built to the requirements of the chief mechanical engineer, British Railways Central Staff, by Cowans, Sheldon and Co., Limited, of St. Nicholas Works, Carlisle, and are for use in the following regions:

	75-ton capacity	*30-ton capacity*
Eastern Region	2	–
London Midland Region	3	6
North Eastern Region	2	–
Scottish Region	1	–
Southern Region	2*	2*
Western Region	2	2
Total	12	10

* Diesel-engined cranes.

TECHNICAL DATA

75-TON DIESEL BREAKDOWN CRANES

Total weight	120 tons (approx.)
Total length of crane undercarriage and relieving bogies	58 ft. 1 in.
Wheelbase	16 ft. 6 in.
Length of jib wagon	35 ft. 1 in.
Maximum axle load when travelling in train	Not exceeding 17 tons
Wheel diameter	3 ft. 1 in.
Propping beams—maximum centre of jacks	17 ft. 6 in.
Tail radius	17 ft.
Length of jib	49 ft.
Maximum radius of hook	40 ft.
Minimum radius of hook	18 ft.
Height of hook throughout jib range	37 ft. above rail level to 30 ft. below rail level

CAPACITIES:

	Level rails tons
Blocked up—outriggers fully extended	
18 ft. radius	75
20 ft. ,,	65
25 ft. ,,	40
30 ft. ,,	30
35 ft. ,,	20
40 ft. ,,	15
Crane free on rail	
18 ft. radius	12
20 ft. ,,	10
25 ft. ,,	6½
30 ft. ,,	4
35 ft. ,,	2½
40 ft. ,,	1

SPEEDS:

Main hoist	75 tons at 10 ft. per min.
Auxiliary Hoist	12 tons at 45 ft. per min.
Hauling	6 tons pull at 90 ft. per min. on single part when reeved for hauling purposes
Slewing	One rev. in 2 min. (max. load)
Derricking	Running height to 18 ft. in 2½ min. Rated loads from max. to min. radius at about 15 ft. per min.
Travelling	300 ft. per min. with 12 tons load on level track. On gradient of 1 in 40 at about 150 ft. per min.
Power unit	Rolls-Royce four-cylinder vertical, in-line, supercharged diesel engine, rated at 149 b.h.p. at 1,500 r.p.m.
Transmission	Rolls-Royce twin-disc three-stage Hydro-kenetic torque converter

75-TON STEAM BREAKDOWN CRANES

Identical with the 75-ton diesel breakdown cranes except that they are powered by two 8-in. bore by 14-in. stroke steam engines operating at a working pressure of 150 lb. per sq. in.

30-TON DIESEL BREAKDOWN CRANES

Total weight	65 tons (approx.)
Total length of crane undercarriage	32 ft. 10 in.
Wheelbase	23 ft.
Length of jib wagon	41 ft. 1 in.
Maximum axle load when travelling in train	Not exceeding 12¾ tons
Wheel diameter	3 ft. 1 in.
Propping beams—maximum centre of jacks	14 ft.
Tail radius	14 ft.
Length of jib	45 ft.
Maximum radius of hook	40 ft.
Minimum radius of hook	16 ft.
Height of hook throughout jib range	36 ft. above rail level to 30 ft. below rail level

CAPACITIES:

	Level rails tons
Blocked up—outriggers fully extended	
16 ft. radius	30
20 ft. ,,	25
25 ft. ,,	17½
30 ft. ,,	13
35 ft. ,,	10
40 ft. ,,	8
Crane free on rail	
16 ft. radius	10
20 ft. ,,	7
25 ft. ,,	5
30 ft. ,,	3½
35 ft. ,,	2½
40 ft. ,,	1¼

SPEEDS:

Hoisting	30 tons at 25 ft. per min.
Hauling	6 tons at 125 ft. per min.
Slewing	One rev. in 1 min. (max. load)
Derricking	Running height to 16 ft. radius in 2 min. Rated loads from max. to min. radius at about 15 ft. per min.
Travelling	300 ft. per min. with 10 tons load on level track. 150 ft. per min. up gradient of 1 in 40
Power unit	Rolls-Royce four-cylinder vertical, in-line, supercharged diesel engine, rated at 119 b.h.p. at 1,500 r.p.m.
Transmission	Rolls-Royce twin-disc three-stage Hydro-kenetic torque converter.

30-TON STEAM BREAKDOWN CRANES

Identical with the 30-ton diesel breakdown cranes except that they are powered by two 8-in. bore by 14-in. stroke steam engines operating at a working pressure of 150 lb. per sq. in.

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SCOTTISH A.E.R. UNIT

Engaged in Movement Control

A SCOTTISH unit of the Army Emergency Reserve, No. 6 Movement Control Group, R.E., whose ranks include Scotsmen from all parts of the country in many walks of life and whose activities have been reported on from time to time in these columns, has been reorganised on a regimental basis and now forms the nucleus of Scotland's newest regiment—the 75th (Scottish) Movement Control Regiment, R.E. (A.E.R.). The army has always tried, with a fair amount of success, to keep its units in neat tidy symmetrical packets with easily recognisable labels. The words "battery," "battalion," "squadron," etc., conjured up a picture of a certain type and size of unit, but the movement control group was exceptional and an unknown quantity even to members of other army units. They were first formed during the 1939-45 war and many such "groups," including No. 6, did a valuable job of work in every theatre of war—living up to the Corps motto of *Ubique*.

In ports and depots in the U.K., on lines of communication throughout the world in all climates and conditions of comfort and discomfort, with the partisans in the Balkans and with the assault troops in the invasion of N. Africa and Europe theirs was the task of ensuring that, so far as was humanly possible, men and materials got to the right place at the right time with the maximum economy of shipping and other transport carrying capacity. Now, with the passing of the groups, comes the end of a chapter and the beginning of a new one, and, for the 75th (Scottish), the change has come at an opportune time, since 6 Group was exceptional in another way. Last year it had recruited its full complement of volunteers and, but for the change, would have had to close its doors to further recruits.

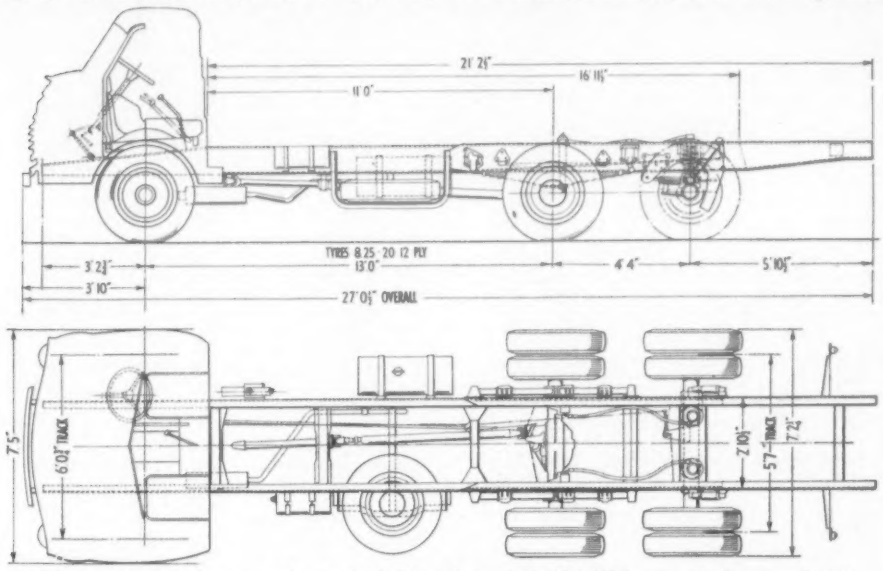
The regiment's commanding officer, Lieut.-Col. John Young, R.E. (A.E.R.), a civil servant in the Inland Revenue (Estate Duty Office), Edinburgh, spends most of his evenings in his home at 1 Rosslyn Crescent, Edinburgh, dealing with the heavy correspondence which the nature of an A.E.R. unit entails since its members rarely meet except at the annual camp; the postman is their main link for 50 weeks a year. He is now looking forward to attaining the higher regimental strength and is particularly keen to recruit good clerks, especially if they have an interest in transport or goods handling problems or have a wide knowledge of army organisation. Previous service in the Forces is desirable but not essential; any men who are interested (age limits, 17½-50) are invited to write to him. There are also vacancies for officers.

COMMERCIAL VEHICLE TEST

*Bedford-Primrose Six-by-Two Diesel Lorry**

UP TO 10½-TON PAYLOAD IN 22 ft. 6 in. BODY

OFFICIAL blessing by Vauxhall Motors, Limited, of two types of lengthening and additional axle conversions of a number of Bedford chassis was reported in MODERN TRANSPORT dated March 26. The two designs approved are those by York Trailer Co., Limited, and Primrose Third Axle Co., Limited, with both of which maximum permitted gross weight of normal- or forward-control Big Bedfords is increased to 33,600 lb. (15 tons) when fitted with either the Bedford 300 cu. in. petrol or diesel engines and to 34,500 lb. (15 tons 8 cwt.) when



Drawing showing layout and principal dimensions of Bedford-Primrose six-by-two chassis for 15 tons gross

are two coil springs interposed between the tubular trailing axle and a chassis crossmember, the tops of the springs actually registering with hydraulic pistons of the load compensator through secondary springs which maintain a minimum pressure of 500 p.s.i. in the hydraulic system; this excludes air and preserves pressure on the main springs in the unladen rebound condition. The trailing axle hydraulic cylinders are in communication through high-pressure hose with hydraulic cylinders interposed between the driving axle and chassis frame, each side forming a closed circuit. Load sharing between the axles is thus varied in relation to the load carried and the nature of the ground traversed.

Trailing-axle location and brake torque reaction are provided for by a quarter-elliptic spring each side arranged as trailing arms. The axle is located inboard of the trailing ends of the leaf springs, the ends themselves being restricted laterally by guide plates mounted on the chassis frame. A ⅜-in. clearance between the spring ends and the guide plates permits a measure of lateral flexibility, while bump and rebound rubbers are fitted at the top and bottom of the guide plates. The trailing

TEST RESULTS AT A GLANCE

Vehicle Details

MAKER: Vauxhall Motors, Limited, Luton, Beds, and Primrose Third Axle Co., Limited, Whalley, Lancs.

TYPE: SLD1 Bedford-Primrose six-by-two lorry.

ENGINE: Bedford six-cylinder direct-injection diesel, bore 3·875 in. (98·4 mm.), stroke 4·25 in. (107·95 mm.), capacity 300·7 cu. in. (4·927 litres), compression ratio 17 to 1; max. 97 b.h.p. at 2,800 r.p.m., 217 lb./ft. torque at 1,400 r.p.m.

TRANSMISSION: **Clutch,** single dryplate 12 in. (304·8 mm.) dia., 136 sq. in. (877·4 sq. cm.) lining area; **gearbox,** four-speed synchromesh (exc. first); **driveshaft,** two-piece open tubular with needle-roller-bearing universals and rubber-mounted centre bearing; **driving axle,** Bedford vacuum-operated two-speed, ratios 6·4 and 8·72 to 1; **trailing axle,** Primrose leaf-cum-coil suspended third axle with hydraulic load compensator.

BRAKES: Vacuum servo-hydraulic all wheels, with separate hydraulic master cylinder each axle; total lining area 785 sq. in. (5,064·5 sq. cm.) Handbrake mechanical to four rear wheels.

TYRES: 8·25-20 12-ply rating standard, various options.

WHEELBASE: 15 ft. 6 in. (4·725 m.).

WEIGHT: Standard chassis with heavy 21-ft. timber dropside body in kerb trim 4 tons 13 cwt. (4,724·6 kg.).

PRICE: Complete SLD1 6 by 2 chassis-cab £1,785 15s.; conversion only £537 plus £10 15s. for flitch plates, where not fitted.

Test Results

ROUTE: Standard route in Kent and Surrey with London addition.

CONDITIONS: Cool, some rain.

RUNNING WEIGHT: 14 tons 19¼ cwt. (15,208 kg.) plus crew of two.

PAYLOAD: 10 tons 6¾ cwt. (10,503·4 kg.).

FUEL CONSUMPTION: Over standard 15-mile out-and-back route continuous running 13·64 m.p.g. (4·8 km./litre) at 25 m.p.h. (40 k.p.h.) average speed.

GROSS TON/M.P.G.: 206 (74 tonnes/km./litre).

PAYLOAD TON/M.P.G.: 141 (51 tonnes/km./litre).

MAXIMUM GRADIENT CLIMBED: 1 in 6 (16·66 per cent).

TURNING CIRCLE: 59 ft. (17·98 m.) wheeltrack, 61 ft. 6 in. (18·75 m.) sweep.

ACCELERATION:
Through gears using low axle ratio:
0-20 m.p.h. 18·5 sec.
0-30 m.p.h. 43 sec.
In top gear low axle ratio:
10-20 m.p.h. 18 sec.
10-30 m.p.h. 39 sec.

BRAKING: Wet roads prevented our normal measured tests. Don meter readings in simulated emergency stops from 30 m.p.h. ranged from 62 to 65 per cent. Handbrake only from 20 m.p.h. 22 to 23 per cent.

ESTIMATED TOP SPEED: Over 45 m.p.h. (72 km.p.h.).

OVERALL FUEL CONSUMPTION: For 85 miles of mainly hard driving, including about 20 miles in London suburbs and low-gear work in various tests, 10·42 m.p.g. (370 km. per 100 litres).

employs a unique system of coil and quarter-elliptic springs for the tubular trailing axle, with hydraulic load compensation between the driven and trailing axles—a system developed by Primrose Third Axle Company for which world patent application has been made. Claims made for the Primrose design include optimum load distribution, giving maximum traction and braking efficiency irrespective of load, and reduced rolling resistance and tyre wear due to scrub, obtained by permitting a degree of lateral flexibility in the suspension; it was therefore with great interest that we approached a recent road test of a Bedford-Primrose six-by-two lorry.

Co-operative Development

The current Primrose conversion for the Bedford has been developed in co-operation with Vauxhall Motors and its general arrangement can be seen in the drawing on page 10. The new

Very light steering and a useful lock are features of the Bedford with Primrose conversion

lengthening sidemembers are butt welded to existing flitch plates (an optional extra on the Bedford chassis) and completed in the normal way with two additional crossmembers, by cold-squeeze riveting. In production vehicles it is intended to carry the frame extension members forwards on the existing frame to the front-spring rear hanger brackets. The main suspension units

* No. 473 in the MODERN TRANSPORT series of road tests.

axle is damped by Woodhead-Munroe telescopic units employing special settings.

Brake Layout

A great deal of care has gone into development of the brake layout of the six-wheelers to obtain optimum balance between the three axles. The Clayton Dewandre 5½-in. vacuum servo unit and tandem hydraulic master cylinder of the standard Bedford are retained, one master cylinder serving the front axle as before and the other now actuating the trailing-axle brakes. A 9½-in. Clayton Dewandre Hydrovac (combined reservoir, servo and master cylinder) is added for operation of the driving-axle brakes; this is energised through an inverted vacuum-fluid reaction valve teed into the trailing-axle hydraulic line and supplied by vacuum through a non-return valve from the standard vacuum reservoir. The system is designed to provide the greatest hydraulic line pressure for a given pedal pressure at the driven axle—the axle carrying most of the weight—and all units have been mounted close together to keep operating delay to a minimum.

The modified handbrake system comprises a compensating lever fitted to the bottom of a standard Bedford lever, from each side of which standard handbrake cables connect with standard operating fulcrum levers on the driving and trailing

(*Continued on page* 10)

"Battleships to Bedplates"

BARIMAR Scientific Welding ensures **DEPENDABLE**

Repairs . . . It takes a good deal to jolt the Barimar Scientific Welding Service. The more "impossible" the job, the keener is Barimar to tackle it successfully. "From a damaged battleship to a broken bedplate," well describes the range of Barimar activities—so varied are they—so unusual the demands upon Barimar's ingenuity and resources. *Every* Barimar welding job emerges strengthened, toughened, more durable than ever, and fully guaranteed.

DAMAGED CRANE BEDPLATE. One portion was completely severed; other places were badly cracked.

This 8-ton bedplate of a crane reached the Barimar workshops in a sorry condition. One portion of it was completely severed, and other places were badly cracked. This was a repair that *had* to be DEPENDABLE—to stand up to the enormous strain to which cranes are subjected. The second picture shows the complete repair, covered by the Barimar Money-Back Guarantee.

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CYLINDER HEADS: Broken and cracked heads, cracked and worn valve seats, chipped, warped or damaged faces, broken rocker standards, defective camshaft bearing housings, cracked stud holes, stripped plug threads. IRON OR ALUMINIUM.

CRANKCASES: Fractures caused by broken connecting rods and run big ends, broken-off bearer arms, smashed sumps, cracked stud housings, broken bearings and flywheel housings, stripped drain-plug threads. IRON, ALUMINIUM OR ELEKTRON.

CRANKSHAFTS: Broken across web or journal, cracked, scored, threads stripped, splines or tapers worn.

TRANSMISSION: Cracked or broken gearbox and axle casings, damaged gear teeth, worn splines and tapers, fractured shafts, cracked differential casings.

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NEWS FROM ALL QUARTERS

Transport Tribunal Annual Report

The annual report to the Minister of Transport of the proceedings of the Transport Tribunal in 1959 has been published.

C.N.R. Passenger Trains Take Trailers

Movement of semi-trailers by rail, known in Canada as "piggyback," has up to recently been confined to freight trains. But in order to make the best possible use of all its services and facilities the Canadian National Railways is now conveying "piggyback" traffic on regular passenger trains.

Roundabout at Apex Corner—A1 and A41

Pedestrian subways are to be provided under a new and larger roundabout which is to be constructed at Apex Corner, Mill Hill, about 10 miles from the centre of London. The scheme also provides for a second carriageway on the Barnet bypass from Apex Corner northwards to Courtlands Avenue, a distance of about 700 yards. The remainder of this section is not being tackled.

Oberammergau by Coach

Between July 1 and September 15, the Swiss and German postal administrations will again jointly operate a daily coach service linking St. Moritz with Garmisch, Oberammergau and Munich. Tours in the latest Swiss postal motor coaches through Switzerland and frontier regions are to be run every week during the summer. Starting and ending in Basle, they take exactly one week, viz. from Monday morning till Sunday evening.

Birmingham Ban Excludes Goods Vehicles

After a three-day inquiry in April Birmingham Corporation's proposals for further parking restrictions in the city have been approved by the chairman. He makes special recommendations that furniture removal and newspaper vans should be exempt from a total ban on waiting. The corporation asked for a number of traffic orders. They included a ban on nearside parking—except for vehicles loading and unloading goods—in the city centre during the day hours, a ban on nearside waiting during the evening rush hour in the 14 radial roads leading from the city centre, and restrictions on 13 other city centre streets.

TV Replaces Station Staff in Paris

The Régie Autonome des Transports Parisiens has harnessed television to the service of the Métropolitain. In underground stations located along a curve the guard in the car at the head of the train cannot see the last cars along the platform of the outer curve. There is consequently a certain risk, when he closes the doors, that a passenger may become wedged in one of the doors at the rear. In order to prevent this, an employee specially stationed in the middle of the platform supervises the rear of the train and signals to the front guard when all is clear. In certain stations a television camera has been experimentally used in place of the extra employee. The camera projects the image of the last three cars on a television screen located by the front coach at a height where it can be easily seen by the guard.

Line Closing in East Anglia

The Eastern Region announces that on and from June 27 freight train services will be withdrawn between Bury St. Edmunds (exclusive) and Thetford (exclusive). This section of line will then be closed completely.

A.W.S. from Kings Cross to Newcastle

Installation of the automatic warning system track apparatus has now been completed between Durham and Newcastle by the North Eastern Region of British Railways. This means that the East Coast main line between Newcastle and Kings Cross, a distance of 268 miles, is now fully equipped.

Hayling-Portsmouth Chair Lift?

Plans for a chair lift from Hayling Island across the entrance to Langstone Harbour are being placed before the Development and Estates Committee of Portsmouth City Council by British Chair Lifts, Limited. Some 2,000 passengers an hour could be carried over the 600-yd. stretch of water from pylons 100 ft. high. At present there is a ferry. Admiralty and Ministry of Transport consent is being sought; an Act of Parliament might be deemed necessary.

Hong Kong Railway Modernisation

A programme of re-equipment and extension for the Hong Kong railway system is announced by the Kowloon—Canton Railway (British Section). The reorganisation will be aimed mainly at an improvement of passenger facilities. In the period 1961-62 sums totalling some 17 million Hong Kong dollars are to be spent. Among other improvements is the purchase of three diesel-electric locomotives and 23 passenger coaches and the installation, at the equivalent of £200,000, of a modern signalling system.

Toll Roads "A Red Herring"

The consideration of tolls on motorways to help finance the road programme (MODERN TRANSPORT last week) is a red herring which conveniently excuses the Treasury's failure to announce, some while ago, the much larger road programme which is so urgently needed. This is the line taken by the British Road Federation, which says also that the Government's intention to double the standard of living within a generation will result in a substantial increase in resources available for capital investment. "The Treasury cannot now contend that it is not possible to meet essential expenditure on road modernisation."

Electric Locomotives in India

For the first time, electric locomotives will be manufactured in India at the Chittaranjan Factory with foreign technical collaboration. The Indian Railway Board is in negotiation with British and other firms to manufacture in the first instance 10 d.c. and 42 a.c. electric locomotives. During the third five-year plan it is proposed to step up production to five a.c. electric locomotives a month, while the output of steam locomotives is expected to be established at 14 units a month. Economic and other considerations have influenced India to switch over steadily from steam to electric and diesel traction.

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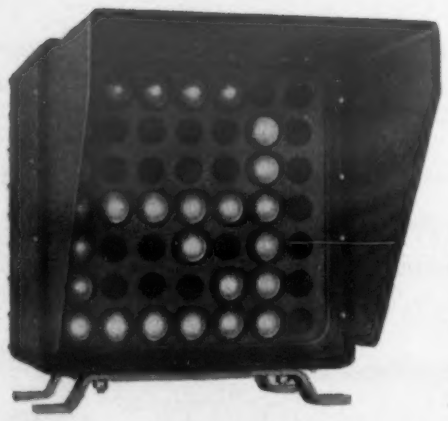
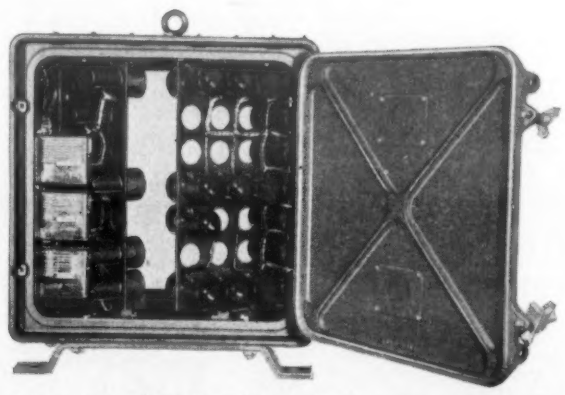


★ Robust in construction, aluminium throughout with one-piece door fitted to left- or right-hand side.

★ Economical in size—
20½ in. x 20½ in. x 14½ in. with 15 in. deep hood.

★ Light in weight—
80 lb., without fixing brackets.



Finish: matt black unless otherwise specified.
Front Glass: clear, amber or blue.
Hood: pivoted and controlled to allow 6 in. drop away from top to facilitate cleaning.
Fitting: suitable for top of post or light signal, above or below gantry.
Units can be mounted side by side and fitted with a common hood.
Similar unit available for displaying 20 in. characters.

Suitable for high or low voltage operation. Indicator lamps arranged symmetrically in 7 rows of 7 at 2½ in. centres.
Each lamp is contained in its own indicating unit. This consists of lens and bezel; the main plastic body; and the lamp-holder, which can be removed to facilitate lamp changing and inspection. Each lens unit is fitted with a synthetic shroud ensuring clear definition and also eliminating phantom effect. All lamp units are fitted to a two-piece honeycombed panel, so hinged that all lens units and the inner surface of the main glass can be easily cleaned.
Terminals for incoming wires are O.B.A. Cable glands for lead-outs are normally provided.
Control and proving relay are fitted internally.

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COMMERCIAL AVIATION

Responsibility for DH121

AIRCRAFT NOISE

SINCE the three member companies of Aircraft Manufacturing Co., Limited, now find themselves members of separate aircraft groups, they are discussing arrangements whereby the DH121 project will in due course be fully undertaken by the de Havilland Aircraft Co., Limited. Hunting Aircraft and Fairey Aviation have agreed to co-operate to the extent necessary to ensure the planned programme. The DH121 aircraft, with three Rolls-Royce RB163 by-pass jet engines, is to have very high subsonic speed for economical short-haul operations. An initial fleet of 24 aircraft is being built for British European Airways for operation from late 1963.

Boeing Deliveries

Out of total orders for 213 Boeing jet air liners, 120 had been delivered by the middle of May and 114 were actually in service. Between them these 114 aircraft had flown 213,700 hours representing 96,300,000 miles and had carried 4,941,000 passengers.

B.E.A. Sardinia Service Starts

On June 5 British European Airways began the first scheduled air service between London and Sardinia. The new operation brings Sardinia to within 3½ hr. flying time of London. The service is provided by an intermediate call by a Viscount on the London—Malta service and will be operated once a week on Sundays until September 25. The return service calls on Fridays until September 30.

New York—Rome Nonstop

The first nonstop jet service from New York to Rome and the first jet service to Athens was inaugurated by Trans World Airlines on May 27. This reduces the travel time from New York to Rome to 8 hr. 5 min. and the flying time to Athens to 9 hr. 40 min. The service leaves New York on Friday evenings and returns from Athens and Rome on Saturday afternoons.

Australian Sheep for Roumania

A special Qantas Empire Airways charter flight recently carried a consignment of Australian Carriedale sheep from Melbourne to Bucharest for the Roumanian Government. The sheep travelled in double-deck pens aboard a Lockheed Super Constellation freighter. Total elapsed time for the flight was 46 hr. and the consignment comprised a flock of three stud rams and nearly 100 ewes in lamb.

B.O.A.C. Boom in Africa

Large increases in the number of people flying by B.O.A.C. and its partner airlines in Africa are shown by figures for the first few months of 1960. On the London—West Africa route 25 per cent more passengers were carried in the first quarter of 1960 than in the first quarter of last year. On the Springbok route—London to South Africa and Rhodesia—the 1960 rise is 20 per cent, while between London and East Africa the increase is 10 per cent. In April, African business was 23 per cent up on April, 1959.

British Traffic in March

It is provisionally estimated from statistical returns so far received that United Kingdom airlines traffic on scheduled and inclusive tour services in March amounted to 32 million short ton-miles. This represented an increase of 18 per cent compared with March last year. Capacity operated increased by 20 per cent but the overall load factor fell from 61 to 60 per cent. In the first quarter of 1960, traffic totalled 85 million short ton-miles compared with 70 and 62 million short ton-miles in the first quarters of 1959 and 1958 respectively.

New Handley Page Research Aircraft

An important aspect of very fast aircraft is their behaviour at low speeds. This cannot be anticipated satisfactorily by theoretical or tunnel-testing methods alone. Handley Page is, therefore, building—under Ministry of Aviation contract—a small research aeroplane so that low-speed investigation can be carried out in the air. This single-seat aircraft—the H.P.115—will fly this year. It has a slender, low-aspect-ratio delta wing and is powered by a small jet engine. It will be flown to study stability, control and handling characteristics in order to assess the performance to be expected from aeroplanes of this layout during take-off, approach and landing. The H.P.115 will make possible for the first time practical flying experience with a wing of this type and will provide much data for full-size design.

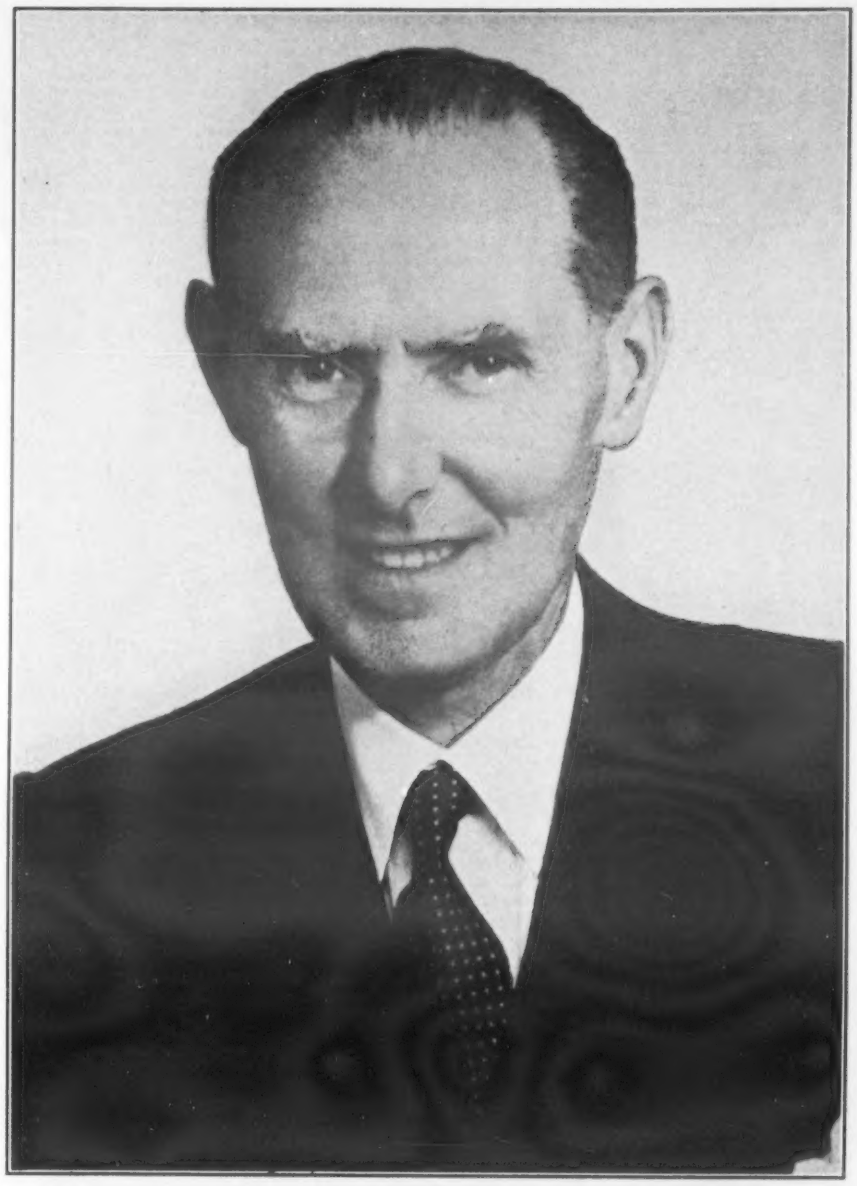
Chinese Cause Complication

Difficulties have arisen regarding the proposed Air Ceylon service to Canton as the Chinese Government has refused, because of Ceylon's partnership with K.L.M. (Royal Dutch Airlines), to disclose details of Chinese territory, alternative airfields and beacons because it fears that the information could be used by the Netherlands and its allies for military purposes. The Netherlands is a member of N.A.T.O. Although the agreement between China and Ceylon has been signed giving Air Ceylon traffic rights in Canton, operations cannot begin until the information needed is obtained. It has been decided that the service should be manned by 75 per cent Ceylonese crews with Dutch personnel making up the rest. It was originally proposed to inaugurate this service to Canton in October following the purchase of Lockheed Electra aircraft.

Meeting on Aircraft Noise

The Minister of Aviation, Mr. Duncan Sandys, held a meeting on June 1 to discuss the problem of aircraft noise. The Minister stressed the seriousness of the annoyance caused. He said it was incumbent on all concerned with air transport to make a combined effort to tackle the problem. While recognising that airlines had to operate the types of aircraft which now exist, they and the aircraft manufacturers would, he said, have to give increased attention to the limitation of noise, when deciding specifications for future types. In this connection, the aero-engine manufacturers explained the steps they were taking in their current designs to reduce the ratio of noise to power. The airlines described the operating procedures they were following to restrict noise over built-up areas in the vicinity of airports and suggested ways of making these more effective. The Minister made it clear that, where noise limitations were laid down, they must be adhered to. He hoped that all concerned would help him to secure this by voluntary co-operation.

DEATH OF B.T.C. SECRETARY



The late Mr. S. B. TAYLOR, B.Com., F.C.I.S., M.Inst.T.

• • • • • •

We record with deep regret the death at the age of 59 of Mr. Sidney Berald Taylor, chief secretary of the British Transport Commission. His was a delightful personality—he was studious, pleasant, self-effacing and mindful of the needs of others. He performed valuable services both to his employers and the Institute of Transport. His career was a remarkable one of a rise from the lower grades of the railway service. The son of George Taylor, he was born on September 19, 1900, and in 1915 when only a youth joined the Great Western Railway service in the registration office at Paddington. In 1921 he became a member of the personal staff of the secretary of the Great Western Railway Company; he attained the position of chief clerk in 1934. In the meantime, besides obtaining his secretarial qualifications, he had become a Bachelor of Commerce of the University of London and in 1928 capped his studies at the London School of Economics by being awarded by the University a Sir Ernest Cassel travelling scholarship which enabled him to study at Columbia University, New York; he travelled extensively and gained considerable American business experience. His promotion to the post of assistant to the secretary, G.W.R., came in 1939; early in 1945 he was appointed acting assistant secretary, becoming joint assistant secretary towards the end of that year. He had held the position of secretary of the London Midland and Scottish and Great Western Railways Joint Committee from 1937. He became deputy secretary of the British Transport Commission in November, 1947, and was made chief secretary in June, 1951. He was deeply interested in transport and other technical education and served from 1942 to 1950 on the Examinations Committee of the Institute of Transport during the period of postwar readjustment. He served on the council from 1950 to 1953; from 1953 to 1956 he was hon. treasurer of the Institute. Currently he was a member of the council of the Chartered Institute of Secretaries and of the Royal Institute of Public Administration; he was a vice-president of the Railway Students' Association.

IN PARLIAMENT

Exceptional Loads

NO LANCASHIRE PLAN

NEW proposals for further control of exceptional loads by road were sent out in a circular letter issued by the Minister of Transport on May 24. MR. ERNEST MARPLES himself told the Commons this last week. The letter proposes certain controls on the movements of very long loads—which cause more congestion than wide ones—similar to those relating to wide loads, and a special control by the Ministry on loads between 14 and 20 ft. wide. Comments are as usual invited. MR. H. J. BOYDEN asked the Minister to consider introducing a compulsory convoy system for all abnormally wide or dangerous loads, limiting their movement to the hours of 9 p.m. to 7 a.m., announcing their routes, and instituting regular police control of such convoys. In another answer the Minister said that the question of the cost of police patrols was one to be addressed to the Home Secretary. Heavy vehicles, however, contributed an enormous revenue before they could go on the road. Answering the time-worn plea that the railways were a much more suitable place for such loads, Mr. Marples observed that the "odd thing was that even if these loads go on the railways they still have to go on the roads to get to their destinations."

Lancashire Co-ordination Not on the Agenda

To set at rest the mind of MR. C. MAPP, MR. ERNEST MARPLES told him that he had made no proposals to the special advisory group on the B.T.C. concerning the co-ordination of road and rail passenger services in Lancashire. Whether the committee would take such matters into account was another question, he added. The Minister was also asked by Mr. Mapp what proposals he had in mind for the setting up of new transport authorities for highly populated industrial areas, and what areas these proposals will cover. He referred to recent reports in Lancashire newspapers. Mr. Marples very properly reminded him that these were matters for the local authorities concerned, but he would certainly be prepared to consider, for example, a Manchester passenger transport group.

Putney High Street Experiments

SIR CYRIL BLACK asked the Minister of Transport whether in view of what he termed the success of the experimental regulations in Putney High Street in speeding up the traffic, he would consider imposing similar regulations on all bus routes in the Greater London area. MR. ERNEST MARPLES said that the composite experiment in Putney High Street was designed to help traffic flow generally; it must be fully analysed before application elsewhere.

★

CARTER PATERSON

(*Continued from page 3*)

William Wallis Allen, then traffic manager, felt aggrieved by this decision and left Carter Paterson about 1892 to become sole proprietor of what was then Bean and Company's Express. Bean's Express, Limited, was registered in 1907 and W. W. Allen was joined by his son, William Percy Allen, who was later to transfer his activities to the London omnibus sphere, where he formed the successful Premier Omnibus Company. With the Allens in control, Bean's Express made rapid headway, opening depots at Fulham, Twickenham, Thornton Heath and Muswell Hill, as well as in Old Kent Road.

Introduction of motor vans into the Carter Paterson business dated from 1906, although steamers had been purchased a few years earlier. Motors enabled deliveries to be both extended and speeded up. In 1906 two new companies were formed, each with a nominal capital of £10,000, to exploit the new medium. The London Motor Parcel Express, Limited, was to handle the longer delivery runs in the Metropolis and the London and Provincial Despatch Co., Limited, was intended to inaugurate services to the country. About 40 vehicles were ordered for the two businesses, which were to work in conjunction with the parent company.

The 1912 Amalgamation

The present century was not very old before it became abundantly clear that competition on this scale, accompanied inevitably by rampant rate-cutting, was bleeding everybody white. In 1912 John James Paterson (who had succeeded Walter Carter upon the death of the latter in 1904) was party to an agreement which resulted in the amalgamation of his company with L.P.D., Bean's Express and the London and suburban parcels business of Pickfords. There was an immediate agreement on rates, some sorting out of areas and a combined board of directors under the chairmanship of Harry Lloyd Baxendale, one of the famous family of Pickfords people. The ordinary capital of the company was raised from £250,000 in £100 shares to £775,000 in £1 ordinary and preference shares for these purposes.

In retrospect the 1912 amalgamation is seen to have been timely, if short-lived. The 1914-18 war denuded all the companies of hundreds of horses commandeered by the Army, together with many motor vehicles, and strained manpower resources to the utter limits. Some depots could be closed in the course of rationalisation, others had to be closed because of the falling-off in trade and the labour shortage. Digressing for a moment, it is a little-known fact that a few years before the war Herbert Paterson (a son of Robert Paterson) had with some others purchased a Paris business with the imposing title, Les Anciens Etablissement J. Lejeau Fils, maintaining a stud of 3,000 horses and organised rather like Bean's Express. It was disposed of before 1914 owing to the difficulties of effective management from London.

For one of the partners, the 1912 amalgamation was certainly short-lived. In 1920 the Baxendales disposed of Pickfords to the Proprietors of Hay's Wharf, Limited. They appear to have decided to concentrate their attention on their new-found interests and it must be remembered that the character of Pickfords, which had finally lost its cartage agency with the L.N.W.R. in 1901, had been changing. For its part, Hay's Wharf had had a particular eye on the meat section of Pickfords for its own cartage subsidiary, Cliffords, Limited, now renamed Hay's Wharf Cartage Co., Limited, which assumed control of Pickfords. A prompt restart was made in parcels delivery, using the multiple-shop delivery department (as it was termed) as a foundation.

(*To be continued*)

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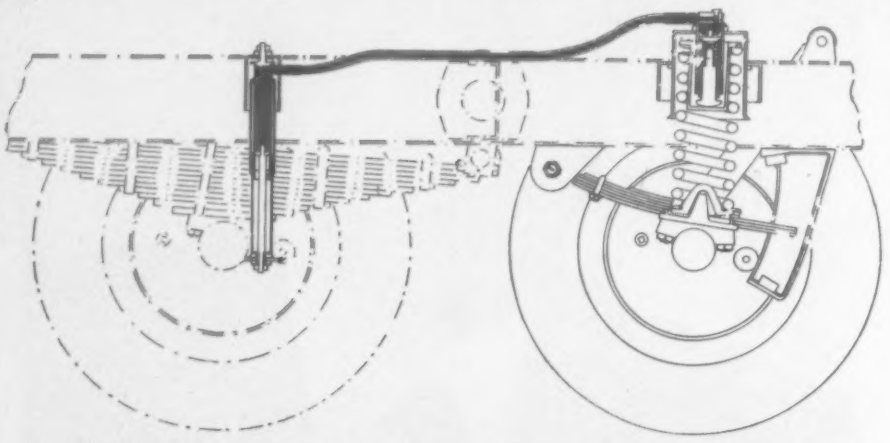
Bedford Six-Wheeler on Test

(*Continued from page 7*)

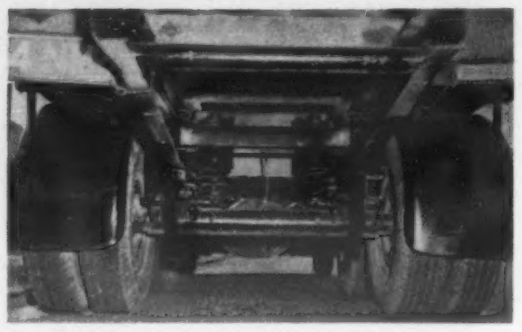
axles respectively. Total brake lining area provided on the three axles is 785 sq. in.

Weight distribution in unladen and laden conditions of the vehicle tested indicates how the hydraulic compensator varies the load sharing of the bogie axles. Unladen, the vehicle, which was fitted with a fairly heavily constructed 21-ft. timber dropside body, had an operating weight of 4 tons 12¾ cwt., borne 1 ton 17 cwt. on the front axle, 2 tons 1 cwt. on the driving axle and 15 cwt. on the trailing axle. A load of ballast spread evenly over the floor brought the running weight for the test run up to 14 tons 19¾ cwt. and distribution then was 3 tons 4 cwt. over the front axle, 7 tons 12½ cwt. over the driving axle and 4 tons 3¼ cwt. over the trailing axle. The payload equivalent as tested was roundly 10 tons 7 cwt. With a lightweight body, payload capacity could be over 10½ tons within the maker's recommended maximum with either of the Bedford 300 cu. in. engines and nearly 11 tons with the Leyland diesel.



Layout of the Primrose quarter-elliptic coil-spring third-axle suspension and hydraulic load compensator shown in the unladen condition

We took the vehicle over our standard test route, starting with a run through the south-west London suburbs from Richmond to Purley Way, and in the fairly heavy traffic its outstanding handling feature—extremely light steering—was a boon. Most rigid six-wheelers have heavy steering, but that of this vehicle was as light as an average 5-tonner and commendably accurate and self-centring; allied with other easily operated Bedford controls, on which we have previously remarked, it made for generally light work for a vehicle of this weight and partly compensated for the rather slow recovery to normal speed after traffic checks, which required maximum use of the gearbox. The Primrose trailing axle obviously sets up little resistance to steering, a fact which was also evident from the very light scrub markings on full-lock turns. The lock is generous and the vehicle could be turned in a swept circle of 61 ft. 6 in. dia., or 59 ft. measured at the tracks.



The Primrose axle pictured from below and behind

The vehicle was also stable under all conditions of driving, sitting well down on the road on corners—perhaps taken faster than they could have been with many vehicles of comparable weight and size because of the light handling. In addition to the hydraulic load compensator and trailing-axle dampers, which kept the bogie wheels in contact with the road surface in a most efficient manner, hydraulic dampers were fitted also to both front and driving axles. These doubtless contributed to the good ride.

The vacuum-operated Bedford two-speed axle is mandatory with the six-wheelers; with gear ratios of 6.4 and 8.72 to 1 it gives, in combination with the four-speed synchromesh gearbox, eight fairly well-graded gears, which if used conscientiously can partly offset the effects of the comparatively low power-to-weight ratio. Performance of the test vehicle using simultaneous gearbox-axle changes was marred by an occasional misfire in upward axle changes (unusual in the Bedford unit, which hitherto has earned our favourable comment for its fast and positive action), but despite this, measured acceleration performance was better than we had anticipated. A fairly lengthy stretch of level road was required to time acceleration from rest to 30 m.p.h., because of the adverse effect of even slight gradients, but given the right conditions the loaded vehicle could be accelerated from rest to 20 m.p.h. in just over 18 sec. and to 30 m.p.h. in 43 sec. Surprisingly, the vehicle would pull away quite smoothly and steadily from 10 m.p.h. in low top gear, to reach 20 m.p.h. in about 18 sec. and 30 m.p.h. in under 40 sec. on level road. Maximum speed under favourable conditions was just over 45 m.p.h.

Gradient Performance

The Bedford engine and gear ratios selected provide a gradient ability covering most operational requirements in this country. In our own check on Bug Hill, an easy restart was made on 1 in 6 in low first and the vehicle was coaxed away in high first on 1 in 7, indicating gradient restartability fully laden on steeper than 1 in 5. The handbrake held the vehicle easily on 1 in 6. A check on coolant temperature rise during one long, slow climb indicated a wide margin of capacity for operation in ambient temperatures far higher than the 55-60 deg. F. during the test.

The care taken to provide well-balanced brakes and generous lining area in the design has already been mentioned. Unfortunately, wet roads prevented taking our usual accurate measurements of the best the brakes would do under favourable conditions and our brake-performance checks were limited to maximum deceleration recorded on the Don meter in several simulated emergency stops from 30 m.p.h. Readings ranged from 62 to 65 per cent. The handbrake alone applied hard at about 20 m.p.h. produced Don meter readings of 22-23 per cent. After our usual fairly harsh fade test, consisting of coasting for about half a mile down Titsey Hill and holding vehicle speed to 23-25 m.p.h. on the brakes, braking efficiency recorded in a stop from 30 m.p.h. while still on the slope was 35 per cent, while a stop from similar speed after a one-mile cooling run produced a reading of 45 per cent.

Excellent Fuel Economy

The Bedford diesel showed a quite remarkable economy in its consumption of fuel over our standard 15-mile out-and-back undulating route between Limpsfield Common and Riverhead on A25. Not having the clearest of runs, though there was only one complete halt for the traffic lights in Sundridge, the 15 miles was covered at the rather low average speed of 25 m.p.h. for a fuel consumption of 13.64 m.p.g. This is considered a fair indication of what can be expected of a well-maintained vehicle in fully loaded operation in not very open main road conditions. With a small-engined vehicle there is, of course, a wider margin of fuel economy between loaded and empty running which should ensure very favourable results in empty-return trunk service.

We also checked overall fuel consumption for our day's hard work along the hilly Kent—Surrey border, in which we covered 85 miles. This included about 20 miles in suburban London and all the full-throttle low-gear work in acceleration, hill-climbing and other checks. The result of 10.42 m.p.g. indicates what might be expected of a vehicle operated extensively on fully loaded frequent-stop work.

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ALUMINIUM SYMPOSIUM

(*Continued from page 5*)

troubles on passenger trains of up to 650 tons with aluminium stock would be over, it is concluded; with 1,200-ton goods trains further experiment would be worth while. Localised corrosion can be avoided by great care in bonding all joints mating with steel details.

Use of aluminium in rolling stock is viewed favourably in Germany, stated Dr. Ing. A. Mielich, in his review of developments in that country. Recently studies have begun of the possible use of light alloys in bogie frame construction. In the United States, claimed Mr. Gilbert B. Hauser, it was evident that applications of aluminium in railway rolling stock had not come with the rapid and dramatic impact of the light metal's wholesale adoption in other fields of transport or in the building or electrical industries.

But it was also apparent today that after a comparatively slow start, aluminium now was gaining acceptance in the railroad field at an accelerating pace. Technological advances by aluminium fabricators and railroad equipment makers, and the pressure on the carriers themselves to lower operating costs by increasing pay loads and decreasing maintenance expense, had brought the light metal into a new and promising perspective. The next few years would see aluminium being applied to railroad rolling stock in tonnages far exceeding the total for all the years previous to 1960.

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MODERN AIRWAYS and COMMERCIAL AVIATION SECTION

A ROUTE REVIVED

London–Shannon Service of Aer Lingus

USEFUL CONNECTIONS AVAILABLE

THE growth in air traffic generally and the increasing flow of tourists to South-West and Western Ireland has encouraged Aer Lingus to revive a direct air service between London and Shannon more than 11 years after its suspension on April 2, 1949. The airline could not by that time have been accused of dilettantism for it had persevered with the operation since August, 1947, at various frequencies ranging from the initial thrice-weekly through daily to the twice-weekly operation which it was in the end. Type of aircraft too varied with Douglas Dakotas at the outset taking 2 hr. 25 min. eastbound and 2 hr. 40 min. westbound, then, in the winter of 1947, delivery of additional Vickers Vikings made it possible to replace the Dakotas with the faster machines and to reduce the scheduled flying time to 2 hr. and 2 hr. 10 min. respectively.

Soon, however, the plans of the Irish airline for further and rapid expansion—projected routes included those from Dublin to Newcastle, Stockholm, Geneva (an extension of the Paris service), Marseilles and Rome via Shannon, Madrid, and Lisbon, both via Shannon and Bordeaux. The change in Government early in 1948 and the consequent abandonment—for ten years—of the proposed transatlantic service of Aerlinte Eireann is now a matter of history, whether regrettable or not depends upon political standpoint. The decision did, however, lead also to the taking of steps to consolidate rather than expand the European operations of Aer Lingus since the connecting traffic from across the Atlantic, which some of the new operations were specially planned to attract, was unlikely to materialise. Furthermore this, in turn, created a surplus of shorter-range aircraft as well as rendering redundant the Lockheed Constellations bought for the transatlantic service. These were acquired by B.O.A.C. and it was decided to standardise, at least for the time, on Douglas DC3s and Dakotas for services in Europe, the Vikings being sold.

The Revival

It followed that the London—Shannon service reverted to this type and so remained until its suspension. The traffic had not developed as had been hoped and it was felt that better use could be made of aircraft capacity by maintaining the service between Dublin and Shannon and providing connections in Dublin not only with the London service but also to other points in the United Kingdom. Thus things remained from April 3, 1949, to May 30 last when, as already recorded in MODERN TRANSPORT, a daily service was resumed between London and Shannon with Vickers Viscounts. The flying time westbound is 1 hr. 50 min. and in the opposite direction it is 1 hr. 45 min. Travelling outwards from London on the second flight—the aircraft was actually EI-ALG which was acquired recently from Eagle in part exchange for two Series 700 Viscounts—the chocks-to-chocks time was 1 hr. 40 min. and the actual flying time was 1 hr. 29 min., which was 4 min. above the estimate of the aircraft commander, Captain Wilkins.

Both the London—Shannon and Dublin—Shannon flights are made in the evening so that now passengers may leave London Airport at 20.10 hr. (B.S.T.) to reach Shannon at 22.00, whereas travelling via Dublin they used to depart at 17.45 to arrive at Shannon at 21.55. Similarly, in the opposite direction, the journey via Dublin required 3 hr. 25 min. leaving Shannon at 08.55, whereas the direct service departs at 09.30 and arrives at 11.15 compared with 12.20. It should perhaps be emphasised at this point that the Dublin—Shannon service actually continues unchanged and so maintains connections with other Aer Lingus services. One advantage of the morning departure from Shannon and the evening flight from London is that connections are made also with the Irish transatlantic flights. These operate daily until September 30 with three flights a week in each direction calling intermediately at Boston. Thereafter one direct flight and one via Boston are withdrawn and the frequency reduced to five flights weekly. Late in November it is expected that delivery will be taken of the first of the Boeing 707-720s and the attractions of connections with the services whether through Dublin or Shannon should be enhanced. The working of the new service is based on London with the aircraft being outstationed at Shannon overnight, flying in in the morning and then taking up a Dublin flight. This applies in reverse with the evening operation.

Some Possibilities

It seems a little difficult to determine the potentialities of the route as an instigator of traffic. Its timings must necessarily be something of a compromise with the transatlantic connections in mind and also the need to use available aircraft to the best purpose. At the Irish end of the route the earlyish departure and the late evening arrival make it necessary for passengers to have independent means of transport unless living in Ennis or Limerick, both of which are connected with Shannon by regular bus services operating in the normal way almost all-round-the-clock. Beyond those points, however, there is little or nothing available to bring the remainder of the west within reach other than the hired car. Here it looks as though Aer Lingus, usually so commonsense in its approach, has blissfully followed the reasoning of so many airlines that those who can afford to fly can afford to hire a car. It may well be that traffic will develop to justify, at least in summer, morning flights from London and afternoon flights from Shannon. Next year the new Cork airport will also be available for travellers to Southern Ireland.

Nylon in Industry Exhibition

WIDE USES IN TRANSPORT

WIDELY varying uses of nylon products in vehicles and vessels and in connection with land, sea and air transport operations were evident in a recent exhibition in London at the British Nylon Industrial Convention organised by British Nylon Spinners, Limited. Products, many of which have been the subject of reports in MODERN TRANSPORT from time to time, included nylon-cord tyres, vehicle upholstery and safety belts, protective clothing and sheeting, ropes and lines, crash barriers, conveyor belting and collapsible containers for various liquids. This was the first completely comprehensive review of the industrial applications of nylon staged in Britain; the exhibition and the concurrent convention, in which the subjects of papers presented covered a very wide field, illustrated the rapid advances made since the first special industrial nylon yarns were produced in Britain 10 years ago.

Ropes and Lines

Latest developments with nylon in the rope and twine industry included a rope made from undrawn yarn. Drawing or deliberate stretching is one of the normal processes in the manufacture of nylon yarns. By using undrawn yarn it is possible to produce rope with the extraordinarily high energy absorption of up to about 35,000 ft./lb. per lb.; thus a rope only 2¼ in. in circumference, 60 ft. in length, can stop a ton moving at a speed of 60 m.p.h. High energy absorption is also a feature of car safety belts made of nylon webbing, said to be capable of withstanding a force of 20 g. (as met in a collision at 30 to 40 m.p.h.). Also new were some examples of special-purpose ropes in which nylon was combined with steel and p.v.c., while a possible break with traditional rope-making principles was foreshadowed by news of experimental work in which ropes are being made from bunches of parallel yarns held together inside a braided nylon sheath—a technique eliminating the stretch caused by twisting and producing ropes with very low extensibility.

Among the advantages of nylon for ropes and lines are its rotproof qualities, high abrasion resistance and high strength. High strength means that smaller ropes of lighter weight and easier to handle can be used for a given duty. Light weight is not always an advantage, for example in seine warps where it is necessary for the ropes to sink rapidly, and for such uses heavier nylon ropes with p.v.c. cores are produced. The durability of nylon ropes was illustrated by a section of the first large-size deep-sea towing hawser made by a Scottish firm 11 years ago, other sections of which are still in use for harbour towing. A slightly larger rope made a few months later is still in use for ocean towing, having to date completed tows totalling over 100,000 sea miles. A conventional natural-fibre rope normally lasts only about six months.

Loading Nets

Nylon is being used increasingly for mooring lines and in all types of fishing nets, while a rather different type of net made of slotted nylon webbing is attracting the interest of dock authorities for cargo handling. Its advantages are that it lies flat and is easier to clean, in addition to its light weight compared with normal rope nets. Other maritime uses include weather screens, hatch covers, sails and bunting and for sheathing the hulls of wooden boats to give complete watertightness and protection from attack by shipworm. The flexible oil-carrying barge made from nylon named Dracone is already well known to our readers. Examples now being built are 100 ft. long and carry about 35 tons; bigger units to hold about 10 times the quantity are expected to begin trials later this year.

Jerribags

At the other end of the liquid container scale and shown for the first time at the convention is the jerribag—a textile equivalent of the jerrican which is collapsible when empty and thus much more easily stored. It is made of a thin nylon fabric proofed with oil-resistant synthetic rubber and is said to be capable of withstanding considerable rough treatment; an empty 5-gal. jerribag weighs only about 2 lb.

Midway in the range of nylon liquid containers comes the roll-up tank, which is now available in sizes up to about 1,000 gal. The roll-up tank enables any lorry to be used for bulk liquid transport without the handling problems of unwieldy drums. When empty the nylon tanks fold into a compact bundle, leaving the body of the lorry free for return loads. Static collapsible nylon tanks are also now being produced with capacities of up to 10,000 gal. and units of up to 50,000-gal. capacity are under development.

Tyre Cord Plant Expansion

Other uses of nylon in road vehicles are in tow ropes, upholstery and safety belts and also for reinforcing the rubber bellows used in pneumatic suspension. Its use in tyre cords is already well known and the growing demand for nylon cords has resulted in a decision by British Nylon Spinners, Limited, to increase the output of its new factory at Brockworth, Gloucestershire, which is only just starting to come into production. The increased capacity is planned to start up in the autumn of 1961.

Nylon cord is now used almost exclusively in aircraft tyres, in which its strength with light weight and great shock strength are indispensable for modern heavy weights and high landing speeds. It is also used as reinforcement for flexible aircraft fuel tanks, which have greater resistance to damage in crashes, in passenger escape chutes, crew parachutes and aircraft landing braking parachutes, in aircrew crash helmets, in collapsible auxiliary fuel tanks and in lifting bags used as inflatable jacks to raise damaged aircraft after a forced landing or crash.

A new depot opened by Small and Parkes, Limited, at 61 Cardigan Street, Luton (tel.: 4279), offers full Don brake and clutch relining facilities and a wide range of replacement brake shoes and clutch discs, as well as carrying a comprehensive stock of other Small and Parkes products.

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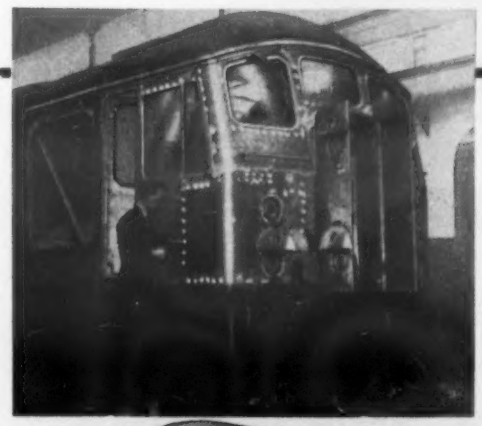

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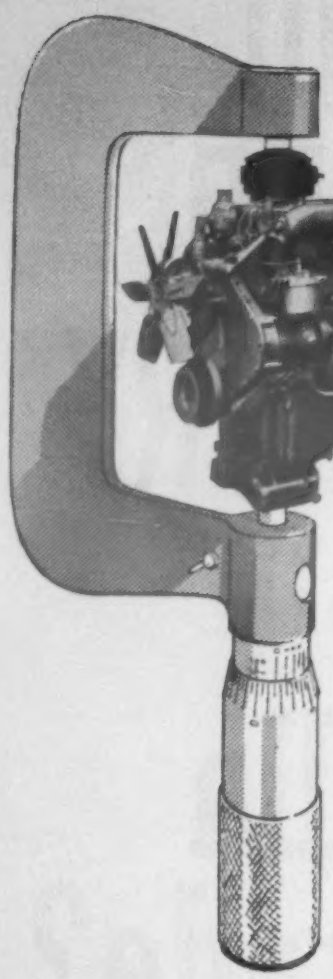

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BOOK NOTICES

A Sumptuous Railway History

GREAT CENTRAL—VOL. I, THE PROGENITORS, 1813-1863. By George Dow, F.R.S.A., M.Inst.T., Assoc.I.Loco.E. (Hampton Court, Surrey: Locomotive Publishing Co., Limited, Craven House. Price 35s.) Despite the enterprising character of the Great Central Railway Company, which fostered many railway developments now deemed commonplace, from buffet cars to staff education, and the fascination of its wayward predecessor, the Manchester, Sheffield and Lincolnshire, dubbed the "railway flirt" from its peculiar associations with its neighbours, remarkably little information has hitherto been gathered in one place for those interested in its history. Its story has largely been told hitherto only as seen by recorders of events on the railways with which it had dealings, alliances and quarrels—the Great Northern, London and North Western and the Midland. An account of its origins and progress is therefore welcome and doubly so in view of its erudite authorship. Mr. George Dow, whose patient and extensive research is evident, has produced a sumptuous, comprehensive and entertaining history which is to be a trilogy. The present volume, which has a magnificent coloured frontispiece of coats of arms, over 100 illustrations and tables, a map and useful appendices, runs over half a century and takes the story only to 1863, but with a wealth of fascinating detail, quotations from original documents and a number of amusing anecdotes. The author's clear and readable style and the authenticity of a well-produced text, beautifully illustrated, combine to make this volume an outstanding contribution to railway historical literature. It stands up excellently to the test by which one eventually judges the works of reference on one's shelves—by picking it up to see what light is shed on a particular matter. We have essayed this test and found the resulting information more than satisfying. The foreword is by Mr. David Lamb, chairman, Modern Transport Publishing Co., Limited, and formerly Editor of MODERN TRANSPORT, who was in Great Central service from 1903 to 1919 and was dandled on the great Sir Edward Watkin's knee when a child. We eagerly await the remaining volumes, which will deal with the later stages of the Manchester, Sheffield and Lincolnshire's vicissitudes and the story of the Great Central with its acquired companies, the Wrexham, Mold and Connah's Quay and the Lancashire, Derbyshire and East Coast.

* * *

LOCOMOTIVES OF THE PRIVATE RAILWAYS OF DENMARK. By William Bay. (Surrey: The Oakwood Press, Tandridge Lane, Lingfield. Price 15s.) The author is head of the running department of the Aalborg Railways, one of the 37 private undertakings remaining in Denmark. The steam locomotive stocks of the private Danish lines were extensive and fascinating; on the standard gauge there were 345 of 120 classes and on the metre there were 102 of 15 classes. The author has made an excellent choice of 47 classes of engine (representing 240 machines) for this fascinating book; there are drawings reproduced at 110th of full sizes of each of those described. The half tones show 49 separate engines. The types range from little four-coupled locomotives and Rowan steam rail motors (built by Kitson) to eight-coupled and Mallet compound tank engines and some very handsome tender engines. This is a most attractive and interesting volume which the publisher has produced at an economical price.

* * *

MAIN LINES ACROSS THE BORDER. By O. S. Nock and Eric Treacy. (Edinburgh: Thomas Nelson and Sons, Limited. Price 25s.) The collaborators played rugby together 30 years or more ago, but intent on the task in hand did not know their mutual interest in railways at that time. Happily they have now come together to provide text and pictures of a work which takes the reader interested in railways and trains running over steep gradients from the North of England across the Border into Scotland on the various available routes.

* * *

ROADCRAFT. THE POLICE DRIVER'S MANUAL. (London: Her Majesty's Stationery Office. Price 3s. 6d. net.) The second edition of this valuable little book drops the Highway Code and certain very elementary matter from its contents but in other respects is generally similar in layout, textual matter and illustrations to the earlier edition. It is extremely readable and easy to understand; a full grasp and practical application of its teaching by all motor vehicle drivers would have a profound effect on road accident figures. Originally the driving manual used at the Metropolitan Police driving school, it has now been adopted as the manual of all police driving schools throughout the country.

* * *

DUNLOP WIDTH OF ROAD MAP. South-West England and South Wales form the subject of the second of the new series of "width of road" maps, now published for the Dunlop Rubber Co., Limited, by Geographia, Limited, price 5s. These maps have been designed to indicate the appropriate width of roads. This notable and extremely valuable departure from conventional road maps has been achieved by grading the Ministry of Transport Class 1 and 2 roads into wide, average or narrow according to their approximate widths, while retaining the Ministry of Transport classifications. New and projected by-pass roads and motorways under the road-building programme which are likely to mature in the next few years are shown.

* * *

A REGIONAL HISTORY OF THE RAILWAYS OF GREAT BRITAIN—VOL. I—THE WEST COUNTRY. By David St. John Thomas. (London: Phoenix House, Limited, 38 William IV Street, W.C.2. Price 30s.) A splendid idea for railway enthusiasts, and indeed for others interested in transport developments, is fulfilled in the appearance of the first of a series of regional railway histories. Mr. David St. John Thomas, the general editor, is author of the first volume and has made a good job of conveying the spirit of the West Country and of recording both the history (historical editor for the series is Mr. Charles Clinker, a happy choice) and working methods against the background of the country served. There are 181 pages of text, three appendices, a general map and numerous sketches of local layouts, as well as 56 fine half-tone plates.

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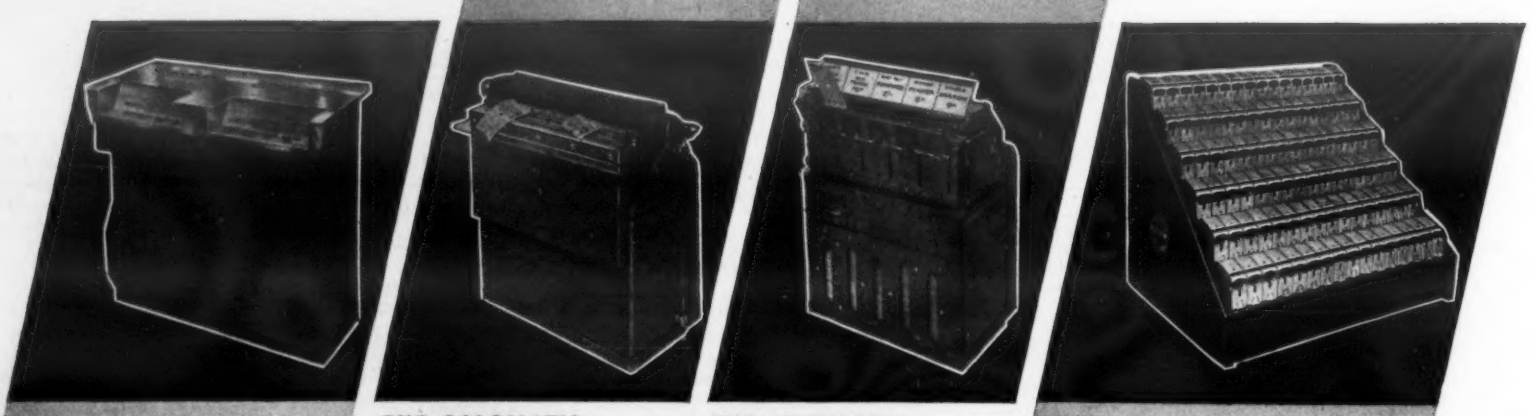

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A MEMBER OF THE LAMSON INDUSTRIES GROUP

NEW BRIDGE TO SPAN TAGUS

U.S.-Portuguese-French Consortium

VARIOUS proposals for bridging the Tagus at Lisbon were recently examined by the Portuguese Council of Ministers, headed by the Prime Minister, Dr. Oliveira Salazar. As a result of their deliberations, the contract, as already announced in MODERN TRANSPORT, has been awarded to the United States Steel Export Company of Pittsburgh, Penn., U.S.A., the leading firm of a consortium embracing Sociedades Reunidas de Fabricaçoes Metálicas, Lda., of Portugal (SOREFAME); Morrison-Knudsen Company, Inc., of Boise, Idaho, U.S.A.; D. B. Steinman, consulting engineer, of New York, U.S.A.; Tudor Engineering Company, of San Francisco, California, U.S.A.; and Compagnie pour l'étude et le développement des Echanges Commerciaux, of Paris (COMPADEC).

Financial Details

The award is provisional, confirmation depending upon approval of the complete working plans, which the contractor has to present within 300 days. Once full agreement has been reached, the entire undertaking must be finished within a period of 4½ years. Although the bridge is to be designed primarily for road traffic, the contractor must provide for the inclusion of a double line of railway, should this eventually be required.

The cost of the work as specified in the successful tender is given as 1,764,000 contos (approximately £22 million), but this figure is subject to modification, consequent upon adjustments that may be made prior to completion of the contract. Financing of the undertaking is to be guaranteed entirely by external credit (as already envisaged in Portugal's Second Development Plan), through the medium of the Export-Import Bank of Washington, U.S.A., and of Seligman and Cie. of Paris. The revenue necessary for repayment of the loan will be provided by tolls collected from the traffic which uses it.

Type of Structure

The main characteristics of the new bridge, when built, will be similar to those of many large suspension bridges already existing in the U.S.A., with one central span of 1,011 metres and two side spans each of 470 metres; these will be supported on two steel piers standing approximately 191 metres above high-water-level (at spring tides) and 230 metres above the river-bed. If one adds the approach viaducts, the total length of the new structure will be in the region of three kilometres; another part of the contract is the construction of highways on either side of the bridge totalling about 13 kilometres.

Competing firms or "consortia" were as under:

(1) Sociedade Atlantico-Portuguesa de Empreendimentos e Expansã Económica (a local organisation).

(2) Société des Forges et Ateliers du Creusot (Usines Schneider) of Paris; Fried. Krupp Maschinen und Stahlbau Rheinhausen, of Rheinhausen; Merritt Chapman and Scott Corporation of New York; Dorman Long (Bridge and Engineering), Limited, of Middlesbrough, and Hojgaard and Schultz A-S, of Copenhagen.

(3) Demag Aktiengesellschaft, of Duisberg; Aug. Klonne, of Dortmund; Dortmunder Brückenbau C. H. Jucho, of Dortmund; Gollnow-Werke A. G., of Düsseldorf; Hein, Lehmann and Co. A. G., of Düsseldorf; Waiss and Freytag A. G., of Frankfurt Main; Siemens-Bau Union G.m.b.H., of München and Sociedade Metropolitana e Colonial de Construções Lda., of Lisbon (SOMEC).

The completed bridge will be the largest of its kind in Europe and the fifth largest in the world; it will greatly improve road communication north and south in Portugal.

LETTERS TO THE EDITOR

Preservation of History

The Editor is always glad to receive letters from readers on subjects germane to the transport industry, but these should be written as concisely as possible. The opinions expressed therein must not, however, be regarded as having editorial endorsement. Where correspondents desire to use a nom-de-plume it is essential that the Editor should be informed of the name and full address of the writer as indication of good faith.

The Great Hall at Euston

SIR,—It is good when our weekly papers—outside the transport world—interest themselves in the Doric arch and Great Hall at Euston; and better still when such a periodical as *Country Life* can devote space to this subject.

To quote from a recent issue: "The recent announcement that the Great Hall and Board Room at Euston station are to be demolished will have depressed not only railway enthusiasts but all lovers of fine buildings. The hall and board room are among the noblest monuments of early Victorian architecture. The Great Hall is, perhaps, the one railway building that can compare with the grand railway halls of America and the Continent. It has a self-confident dignity, a richness and robustness of detail that the present age is certainly incapable of equalling. The Doric Arch is to be re-erected and it is still not too late to consider the possibility of re-erecting the Great Hall in conjunction with it."

I will only add that there must be many thousands, besides myself, who *most* fervently hope that such a possibility—however seemingly remote—will receive the most sympathetic and serious consideration of the British Transport Commission.—Yours faithfully,

J. P. BARDSLEY.

Withdean,
Brighton.

National Transport Library

SIR,—Since 1952 I have been actively concerned in the setting up of a national museum of transport at Beaulieu. In this venture I have been greatly assisted not only by the British motor and motor cycle industries, but also by many individuals. The preservation of motoring history does not only entail the collection of old vehicles. A no less important task is the preservation of motoring books, papers and photographs, etc. With the latter object in mind, I am now in the course of founding a large transport library at Beaulieu.

My main purposes are: to create a national library of transport in Great Britain which will be properly supervised by expert staff, the contents of which will be put into a trust; to open the library free of charge for research or information to the British motor industry and to the general public; to carry out a research programme under the museum's curator and publish at least two books a year on various subjects, and to issue scholarships to students of motoring history to enable them to carry out research.

I am, therefore, appealing to anyone who has any motoring books, catalogues, maintenance handbooks, photographs, etc., to consider donating or loaning them for this library, in order that the greatest possible range of material will be available. I am convinced that the foundation of such a library will be an enormous asset to the country as a whole. I earnestly appeal for help for this important new venture.—Yours faithfully,

MONTAGU.

The Montagu Motor Museum,
Beaulieu, Hampshire.

First-Class Accommodation

SIR,—We are a good deal more concerned than Mr. Selfe (MODERN TRANSPORT, May 7) about the dishonest passengers who deliberately buy a second-class ticket with every intention of travelling in first-class accommodation and not paying the excess fare unless they are compelled to do so. The answer is almost certainly a vigorous policy of prosecuting such deliberate offenders and we are not hesitating to do so. But, apart from the economics of employing enough travelling ticket inspectors to check our 1,500 mixed-class trains daily, there is the difficulty of finding enough experienced men.

Travelling ticket inspectors, who do not at any time have an easy job, are instructed to request a second-class ticket holder to leave a first-class seat if there are first-class ticket holders standing. But if Mr. Selfe finds an inspector failing to take this action we shall be very grateful indeed to hear about it.—Yours faithfully,

F. D. Y. FAULKNER,
Public Relations Officer,
Southern Region, B.R.

Waterloo Station,
S.E.1.

Unnecessary Road Freight?

SIR,—In your issue of May 7 you report that Mr. R. N. Ingram, lately chairman of the R.H.A., contended that the transfer of heavy traffic from road to rail would make no difference to the incidence of road accidents as only 3 per cent of the vehicles involved were heavy vehicles. He overlooks—or doesn't realise—that whereas heavy lorries may not be involved in the accidents, the "bottling up" they cause on narrow main roads may be the primary cause of many disasters between private vehicles, their drivers driven desperate by having to crawl in ever-lengthening queues behind some stinking diesel juggernaut and finally making desperate, and sometimes unsuccessful, efforts to pass it.

Mr. Ingram should spend an hour or so on the verges of the Bath or Oxford roads, especially at the foot of hills like those on the London side of High Wycombe or at the Denham viaduct, and watch one heavy lorry holding back a hundred cars, or two monsters passing each other, inch by inch, in a blue haze of exhaust gases, while a double line of lighter traffic piles up behind. A well-known firm operates a regular rat-run of tank wagons (not oil) along the Bath road to and from the same daily destinations. One single goods train on a regular schedule could carry the lot.

If no means is found of restricting the number of cars on the roads something has got to go or the whole system will seize up. Is not the answer that heavy, long-distance goods traffic should go back to the railways, which sorely need new sources of revenue? A country-wide, timetabled system of freight trains, carrying lorries on flat trucks between basic points, at which they would revert to the roads, would do much to ease the congestion which is becoming worse and worse each month on the main trunk roads of this country.—Yours faithfully,

E. C. CHEESMAN.

Four Doves,
Marlow, Bucks.

[If one guesses aright the identity of the operator of the "rat-run" to which our correspondent refers—incidentally, it is one of the finest fleets in the country—the company will, like many other road transport users, have convincing proof of the overall convenience and economy which it has derived. So far as urban congestion is concerned, one cannot resist the conclusion that Bath Road would benefit equally if, for example, the B.E.A. coach "rat-run" was withdrawn and air passengers obliged to travel by rail to Feltham Station, transferring to coach there. But like the bulk operator complained of, B.E.A. is concerned first and foremost with efficiency. As to lorries on railway wagons, the loading gauge of British Railways makes straightforward imitation of American "piggyback" transport almost impossible.—Editor.]

The London sales office of Klaxon, Limited, manufacturer of fractional-horsepower motors, industrial hooters, sirens and commercial vehicle flashing indicators, is now 189-191 Drummond Street, London, N.W.1 (Tel. EUSton 4102 and 4143).

Goodrich-Gulf Chemicals, Incorporated, Cleveland, Ohio, is preparing for the commercial production of two new synthetic rubbers which will be marketed in the United Kingdom by Durham Raw Materials, Limited, 1-4 Great Tower Street, London, E.C.3. The two new products are Ameripol SN rubber (polyisoprene), said to be the first man-made rubber with the same molecular structure as natural tree rubber, and Ameripol CB rubber (cis-poly-butadiene), which has excellent characteristics for minimising heat build-up—a prime cause of commercial vehicle tyre failure.

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New Signalling at AMERSHAM

By courtesy of London Transport Executive

Amersham Station on the Metropolitan Line of London Transport will become the terminus of Metropolitan Line train service when the electrification scheme from Rickmansworth to Amersham and Chesham and track quadrupling from Harrow to Watford South Junction are completed, and new signalling at Amersham has been brought into operation to deal with mixed suburban and main line traffic.

WESTINGHOUSE

SIGNALLING

was supplied and it was designed and installed under the direction of Mr. R. Dell, Signal Engineer, London Transport.
The control desk has 2 push button panels; the left hand one controls the Amersham signalling, and the right hand one, when equipped, will control the signalling at Chalfont and Latimer.

Westinghouse Brake and Signal Co. Ltd., 82 York Way, London, N.1

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Firestone

Best on the road . . . and off

Dual-purpose

SUPER MILEAGE LUG

DRIVE SAFELY

For rear wheel fitment. Outpulls and outlasts any tyre of its kind. Specially designed dual-purpose non-directional traction tyre for use where off-the-road service is frequent and severe. Power Bite Traction design, with cross grooves, heavy shoulder lugs and circumferential ribbing, gives maximum pulling-power and performance. Tension-Dried Gum-Dipped cord for super-strength body.

EXPERIENCE COUNTS

46 Factories throughout the world.
Firestone total sales exceed £1,000,000 per day.

IMPORTANT CONTRACTS

A.E.C. Order Book

RECENT orders placed with A.E.C., Limited, include a number of substantial ones for both goods and passenger vehicles. Contracts for passenger chassis have been placed by Scottish Omnibuses, Limited, for 35 Reliances, by W. Alexander and Sons, Limited, for 20 Reliances, by Western Welsh Omnibus Co., Limited, for 12 Reliances and by Rotherham Corporation for three A.E.C.-Park Royal integral Bridgemaster double-deckers of the 70-seat forward-entrance type. Goods vehicle orders include one for a further 12 Mercury tippers for the Ham River Grit Co., Limited, and for 25 6 cu. yd. dumpers based on Mandator and Mammoth units placed by the Pretoria Water Affairs Department through A.E.C. Vehicles (S.A.), Limited, which company will build both the chassis and the bodies.

Newcastle Buys Ford Tippers

Newcastle upon Tyne Corporation has accepted the tender of R. H. Patterson and Co., Limited, for the supply of one 3-ton and one 5-ton Ford Thames Trader diesel-engined tipping vehicles.

Italians Order Engine Test Cradle

The Italian Piaggio concern has placed an order with Heenan and Froude, Limited, for a Heenan jet engine thrust cradle for testing Bristol-Siddeley Viper engines, which Piaggio is making under licence.

Malaya Orders Chieftains

The Public Works Department of Malaya has ordered 70 Albion Chieftain tipper chassis from Albion Motors, Limited, valued at over £120,000. The chassis will be equipped with Leyland diesel engines and Edbro-B. and E. three-way tipping gear and will be fitted locally with 6 cu. yd. bodies.

Another Large Ruston Gas Turbine Order

Ruston and Hornsby, Limited, announces an order valued at £300,000, received from the Iraq Petroleum Company, for six TA gas turbine alternator sets for operation on the pipeline from Kirkuk to Tripoli and Banias. These turbines will be remotely controlled and run unattended. This makes a total of 24 Ruston TA gas turbines in service or on order for the Iraq Petroleum Company and its subsidiaries.

Brooke Marine Ferry Boats For Bermuda

Brooke Marine, Limited, Lowestoft, has received an order from Bermuda for two new ferry boats, valued at £50,000. The boats, 68 ft. 6 in. by 16 ft. 6 in. with a speed of 11 knots, will combine the features of excursion boats and ferry boats. Each will have covered accommodation for 75 passengers and deck accommodation for 50, with space for carrying that universal means of land transport in Bermuda—the bicycle. Delivery is scheduled for October.

Air Traffic Services Contracts

International Aeradio, Limited, has been awarded three new contracts. In Aden, I.A.L. is to establish and operate the new civil flight information centre for the Aden Government; under contract to the Colonial Office, I.A.L. has provided three air traffic control officers for duty at Nicosia, Cyprus; and two I.A.L. air traffic control officers have been seconded to the Ghana Government for duty on aerodrome-approach and area control services at Accra Airport. An operations officer is also to be provided for duty with the Civil Aviation Department.

Southern Region Contracts

The Southern Region of British Railways has placed the following contracts:

Geo. Shears and Sons, Limited, Bournemouth, for construction of new signalbox at Hythe Frost Lane.

The Demolition and Construction Co., Limited, London, S.W.1, for new berthing facilities at Dover Marine.

Campbell and McGill, Limited, Winchester, for new dolphins and renewal of piling at Lymington Pier Station.

The Fairfield Shipbuilding and Engineering Co., Limited, Chepstow, for steel and ironwork and waterproofing of deck at Borough Market Bridge, Cannon Street.

John Laing and Son, Limited, London, N.W.7, for construction of steel gantries over berthing sidings at Folkestone Junction.

Czechoslovakia Buys British

Despite intense competition from German, Italian and French manufacturers, the David Brown Machine Tool Division has secured an order worth £80,000 from Czechoslovakia. The contract covers machine tools and ancillary equipment for use in a Czechoslovakian commercial vehicles factory in the production of transmission components. The bulk of the order is for two Hydrax gear hobbers and shavers, a most successful high-speed machine in wide demand overseas and contributing greatly to the Manchester company's very high export figures for gear-cutting plant, which is currently 80 per cent of output.

SHIPPING AND SHIPBUILDING

Hydrofoil on 80-Mile Run

NOW in daily service is the Italian hydrofoil craft *Freccia Dell' Adriatico*. This vessel, built by Leopoldo Rodriquez at Messina, is a new departure in fast passenger carrying ferries. She is operated by Societa Aliscafi on a twice-daily return run between Trieste and Venice, a distance of 80 miles by sea. Equipped with a 1,500-h.p. Mercedes engine, the power developed is such that the vessel rises out of the water within a few yards of take-off and proceeds to skim the surface on the

Crowds gather as the Italian hydrofoil boat "Freccia dell'Adriatico" arrives at Trieste on her twice-daily run from Venice (see story)

foils at an average speed of 40 to 45 knots. There is a clear space of about 2 ft. between the hull and the surface of the water. She carries 76 passengers in comfortable aircraft-type seats, and covers each 80-mile trip in a scheduled time of two hours. Kelvin Hughes has provided its marine radar type 14/9 for the boat and has received further orders for radar equipments to be fitted on similar Italian built hydrofoils for operation in Norway and Finland.

New Australian Company

AN Australian company, Southern Ocean Freightline Pty., Limited, has been formed in Sydney, with the object of establishing a direct shipping service between Australia and South America. The service will commence with the sailing of a chartered vessel from Brazil on June 30 next for Melbourne, Sydney, Newcastle and Brisbane. Initially sailings are expected to be of about three-monthly intervals, but the department of trade is shortly to send a trade mission to South America for the purpose of recovering trade lost because there was no direct shipping service available.

Special Steps Favour Greek Owners

IN order to facilitate the operations of Greek shipping companies which have already transferred or wish to transfer their central offices from abroad to the Piraeus, the Greek Government currency committee has granted Greek owners complete liberty to transfer abroad foreign currency earned by them and necessary to meeting the expenses of their ships and other obligations abroad. This concession, by exempting shipowners from the usual currency restrictions which hold good for other persons, enables the former to transfer funds abroad at a moment's notice in whatever currency they may need. The only obligation imposed on the shipowners by the currency committee is that they must transfer to Greece sufficient funds to acquit themselves of their obligations in Greece. Shipowners' accounts in foreign currency at Greek banks will bear the same interest as ordinary current accounts in drachmas.

After more than a quarter of a century of service with the John Bull Rubber Co., Limited, for the past 14 years, as regional manager for the West Midlands and Wales, Mr. F. C. Doughty has now retired. His successor is Mr. G. H. Taylor.

★

FORTHCOMING EVENTS

June 12.—S.C.T.S. Coach and rail tour of East Kent.
O.S. (Northern). Visit to West Hartlepool Corporation Transport.
O.S. (North Western and Yorkshire). Tour of West Riding.
June 15.—Inst.C.E. Conversazione. Great George Street, S.W.1. 7.30 p.m.
June 19.—O.S. (Midland). Visit to Carlyle Road works of Midland "Red."
O.S. Visit to Eastern Counties Omnibus Co., Limited.
June 23.—I.E.E. Conversazione. Royal Festival Hall, S.E.1.
June 25.—W.W.R.T.S. E. Tonks, "Edge Hill Light Railway, Stratford-on-Avon, and Midland Junction Railway." Exchange Restaurant, Birmingham. 7.15 p.m.
June 25-July 8.—Machine Tool Exhibition. Olympia.
September 5-11.—Society of British Aircraft Constructors. Annual flying display and exhibition. (Public days, September 9-11.)
September 12-16.—Municipal Passenger Transport Association. Conference at Douglas, I.o.M.
September 23-October 1.—Commercial Motor Show. Earls Court.

★

B.T.C. TRAFFIC RECEIPTS: PERIOD NO. 5—1960

	Four weeks to			Aggregate for twenty weeks to		
	May 22 1960	May 17 1959	+ or —	May 22 1960	May 17 1959	+ or —
	(£ thousands)			(£ thousands)		
PASSENGERS						
British Railways	10,664	10,342	+ 322	49,472	46,405	+ 3,067
London Transport						
Road passenger services	4,458	4,338	+ 120	21,325	20,374	+ 951
Railways	2,022	1,834	+ 188	9,784	9,162	+ 622
Provincial and Scottish Buses	4,481	4,476	+ 5	21,196	20,812	+ 384
Ships	418	387	+ 31	1,493	1,508	— 15
Total Passengers	22,043	21,377	+ 666	103,270	98,261	+ 5,009
FREIGHT, PARCELS AND MAILS						
British Railways						
*Merchandise and livestock	8,200	7,959	+ 241	39,620	38,324	+ 1,296
*Minerals	3,891	3,298	+ 593	19,286	17,138	+ 2,148
*Coal and coke	7,893	8,202	— 309	44,612	46,159	— 1,547
*Parcels, etc., by coaching train	4,380	4,271	+ 109	20,681	20,334	+ 347
Total Freight British Railways	24,364	23,730	+ 634	124,199	121,955	+ 2,244
Others	4,632	4,412	+ 220	21,330	20,480	+ 850
Total Freight, Parcels and Mails	28,996	28,142	+ 854	145,529	142,435	+ 3,094
Aggregate	51,039	49,519	+ 1,520	248,799	240,696	+ 8,103

*Includes receipts from collections and delivery, etc.
Comparisons with the previous year are affected by changes in fares and charges which have occurred from time to time.

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SOCIAL AND PERSONAL

Mr. Richard Fairey

THE Fairey Co., Limited, announces that Mr. Richard Fairey will retire from the board and relinquish his position as vice-chairman on June 30. Mr. Fairey has taken this step with the greatest reluctance and only on the unequivocal advice of his doctors. The board has accepted his decision with great regret. The elder son of the late Sir Richard Fairey, M.B.E., founder of the Fairey company, he joined Fairey Aviation in the jig and tool office in 193c. He became personal assistant to the assistant managing directors after the 1939-45 war and subsequently held appointments as general manager and as a director. He was appointed a vice-chairman of the company in November, 1956.

* * *

Mr. D. S. Hart, O.B.E., E.R.D., who has been made divisional traffic manager, Bristol, Western Region, B.R., entered the service of the Great Western Railway as a booking clerk in 1923. In 1938 he joined the staff of the divisional superintendent at Paddington and, as an officer in the Royal Engineers (Supplementary Reserve), was called up at the outbreak of war and went to France in 1939. He subsequently served as a staff officer in the Middle East responsible for transportation, intelligence and planning, and held a similar appointment at G.H.Q., India, before being appointed assistant director of transportation in Persia, where he was mentioned in dispatches. He was awarded the O.B.E. for his work throughout the European campaign. In 1943 he joined the planning staff for the invasion of Normandy and on his demobilisation was colonel in charge of the Hamburg division of

Mr. D. S. Hart

the German Railways. Following a course of special training on his return to England, Mr. Hart was appointed junior assistant to the divisional superintendent, Birmingham, in 1947. There followed appointments as assistant to the district operating superintendent, Bristol, in 1950; assistant district traffic manager, Oswestry, in 1952. After a period studying railway working in the Netherlands during the winter of 1955-56, Mr. Hart was appointed assistant district operating superintendent, Birmingham, Snow Hill, early in the latter year. In January, 1957, he took up the appointment of district passenger manager for the London Midland Region and Western Regions at Birmingham where, in January, 1959, he became operating officer to the divisional traffic manager, which post he now vacates upon taking up his new appointment.

* * *

We regret to record the death on June 3 in the Central Middlesex Hospital of Mr. S. B. Taylor, chief secretary, British Transport Commission. A portrait and biography appear on page 9.

* * *

Mr. M. C. Purbrick, B.Sc.(Eng), A.M.I.C.E., who has been appointed district engineer, Derby North, London Midland Region, B.R., transferred there from Manchester, where he was assistant district engineer. Mr. Purbrick joined the Great Western Railway in 1946 after serving with the Ministry of Aircraft Production, and worked as a surveyor and draughtsman in the new works office of the chief engineer at Paddington. He transferred to the district engineer's office at Bristol three years later, having in the meantime spent nine months in the resident engineer's office at Paddington. In 1954 he became assistant to the district engineer at Plymouth but the following year moved to a corresponding position at Bristol. Mr. Purbrick was appointed assistant district engineer at Cardiff in 1956 and held the post for three years before moving to Manchester.

Mr. M. C. Purbrick

* * *

Sir Patrick Dollan has retired from the board of British European Airways on which he had served from November, 1946. He remains chairman of the Scottish Advisory Council on Civil Aviation.

* * *

Mr. Bernard A. Christie, managing director of I.T.D., Limited, sails from Southampton on the *Queen Elizabeth* for a visit to the United States and Canada. The company is associated with the Austin Motor Co., Limited, Clark International Equipment, C.A., and Crompton Parkinson, Limited, and Mr. Christie will have discussions with members of the Clark organisation in the U.S.A. and with his agents in Canada.

* * *

The paper entitled "The Future for the Railway Passenger" which was read by Mr. G. F. Fiennes (line traffic manager, Great Northern, Eastern Region, British Railways) to the Railway Students Association last November, has aroused considerable interest in the United States, where the future of passenger train services is in jeopardy. Mr. Thomas Taber, formerly Mayor of Madison, New Jersey, who is a fervent campaigner for railways, obtained a copy and sent some to friends in the United States. As a result two passenger traffic associations became interested and between them over 3,000 copies have been sent out to their members in the United States.

Award to Staff Magazine

FOR the third year in succession, *Waterways*, staff magazine of British Transport Waterways, has received from the British Association of Industrial Editors the award of excellence for the best publication in its class in the National House Journal Competition, 1960. The chief publicity officer of the British Transport Commission is responsible for the editorial content. The layout is handled by Mr. Herbert Spencer, F.S.I.A.

* * *

The P. and O. Company announces the retirement of Mr. W. T. Stephens, export freight manager since 1950 and chief freight manager since 1959. Mr. G. S. Guernsey has succeeded him as export freight manager.

* * *

Mr. R. M. Atkinson has retired from the position of managing director of Sulzer Brothers (London), Limited, and of Hathorn, Davey and Co., Limited, and is appointed chairman of the board of both companies. Messrs E. H. Stagg, G. W. Heslett and M. W. Zublin are appointed joint managing directors of each company with effect from June 1.

* * *

The Minister of Transport has appointed Mr. C. E. T. Cridland, M.I.E.E., to be chairman of the Transport Users' Consultative Committee for the West Midland Area to succeed Major C. R. Dibben, C.B.E. Mr. Cridland, a chairman of several manufacturing companies, is a past president of the Scientific Instrument Manufacturers' Association of Great Britain.

* * *

Mr. Fred Burggraf, who is director of the U.S. Federal Government Highway Research Board, is visiting this country and will present a paper entitled "The Merits of Limited Access Highways in Urban Areas" at a British Road Federation meeting at the Royal Society of Arts, at 5.45 p.m. on June 17. Admission is by ticket, available from the B.R.F.

* * *

On May 12 the Eastern Region general manager, Mr. H. C. Johnson, visited the Eastern Region squadron of the Army Emergency Reserve (Transportation), 150 Railway Squadron at Longmoor, Hampshire, during its annual fortnight training period. In the evening he dined with the officers, and the following morning presented a new flag to the squadron on parade. A special train manned by members of the squadron took Mr. Johnson over part of the Longmoor Military Railway.

* * *

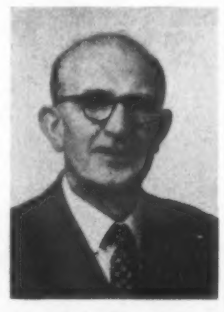
The third term of office of the Transport Users' Consultative Committee for the East Anglia Area having expired, the Minister of Transport has reappointed Captain W. H. Coombs, C.B.E., R.N.R., as chairman. On this committee Mr. L. A. Carey, M.Inst.T., is a member representing industry, new members representing local authorities are County Councillor F. G. Taylor-Balls (Suffolk West), County Alderman A. E. Meeks (Bedfordshire) and Councillor G. Stirling (Norwich). Representing the British Transport Commission are Mr. J. Hancock and Mr. L. H. Balls.

* * *

Mr. N. R. F. Geiger, head of staff section, district traffic manager's office, Paddington, Western Region, has been appointed assistant in the office of the traffic adviser, British Transport Commission. Mr. G. H. Young, modernisation and general assistant, Great Eastern Line traffic manager's office, Liverpool Street, has been appointed assistant operating officer, B.R. Central Staff. Mr. A. Roberts, chief distributor, freight rolling stock section, has been appointed assistant freight rolling stock officer (distribution), B.R. Central Staff, and Mr. A. H. Cole, senior technical assistant (systems) in the electrical engineering department, has been redesignated senior technical assistant (power supply).

* * *

Mr. W. H. Underwood, A.M.I.Loco.E., district motive power superintendent, Glasgow (South), Scottish Region, B.R., has recently retired. He joined the former North British Railway as a fitter in the mechanical engineer's department at Burntisland in 1919. After service in the locomotive running department he was appointed shedmaster. In 1939 he was appointed headquarters technical inspector, motive power superintendent's office, Edinburgh, and in 1941 assistant district locomotive superintendent, Western district, Glasgow. After nationalisation of the railways Mr. Underwood became assistant district motive power superintendent, Glasgow (North), and in 1951 he was appointed assistant to motive power superintendent (maintenance), Scottish Region. He became district motive power superintendent, Glasgow (South) in 1953. Mr. Underwood was awarded the M.B.E. in 1941.



Mr. W. H. Underwood

* * *

Mr. A. M. Porkess, A.M.I.Mech. E., has been appointed chief engineer of the National Gas and Oil Engine Co., Limited, a member of the Hawker Siddeley Group. He was previously chief design and development engineer on medium speed engines for Ruston and Hornsby, Limited.

* * *

We regret to record the death of Sir Dudley Evelyn Bruce McCorkell, M.B.E., B.A., H.M.L., J.P., a member of the County Donegal Joint Committee and of the Ulster Transport Authority, and a British Transport Commission nominee on the board of the Strabane and Letterkenny Railway Company.

* * *

A 35-hour week (excluding meal breaks) for more than a quarter of a million public servants will be demanded at the annual conference of the National and Local Government Officers' Association on June 14-17. The conference, which is being held at the Dome, Brighton, will be attended by 1,575 delegates from all parts of England, Wales, and Scotland. The delegates will represent NALGO's 263,000 members in the local government, health, electricity, gas, new towns, water supply, canals, and provincial bus services. Mr. Norman W. Bingham, chief clerk, Children's Department, Kent County Council, will preside.

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OFFICIAL NOTICES

CITY OF BELFAST

CURATOR OF TRANSPORT MUSEUM

APPLICATIONS are invited for the above post from suitably qualified candidates.

Applicants should be over 25 years of age; possess a good general knowledge of the history of road, rail and water transport and be acquainted with model railway construction and operation. Experience in a Museum, Diploma of the Museums Association or possession of a University Degree or similar qualification in the field of Sociology, Technology or Engineering would be an advantage.

Salary : £980 x £30—£1,100 per annum.

The commencing point on the scale shall be determined in accordance with qualifications and experience.

Superannuation contributions of approximately 6 per cent of remuneration payable. Reciprocal pension arrangements exist with other local authorities.

Canvassing will disqualify.

Application forms, etc., may be obtained from the Director, Museum and Art Gallery, Stranmillis, Belfast, 9. Completed applications must reach the undersigned by July 30, 1960.

JOHN DUNLOP,
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City Hall,
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1 CRANES FOR KUWAIT Out from a West Country factory come crane parts which will go to work in the Persian Gulf – and British Railways' Export Express service will speed them on their way.

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3 ON THE RAILS Cranes transfer cranes; the expanding rail depots have been newly equipped to handle all types of goods – swiftly, carefully, smoothly, all along the route. They will be there next day without fail.

4 PARTS IN PLACE Now, straight to the port. A train is prepared for the main haul, on one of the direct links between 300 industrial areas and ten ports.

5 LOAD ON BOARD Dockside, London – reached on the dot by Export Express. A railway liaison officer sees off the cranes Kuwait needs.

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Photographed by Patrick Ward and Eric Fenton

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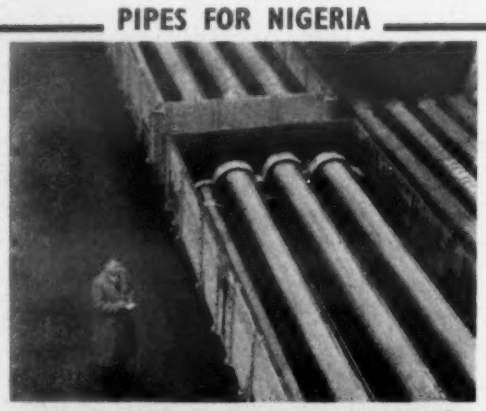
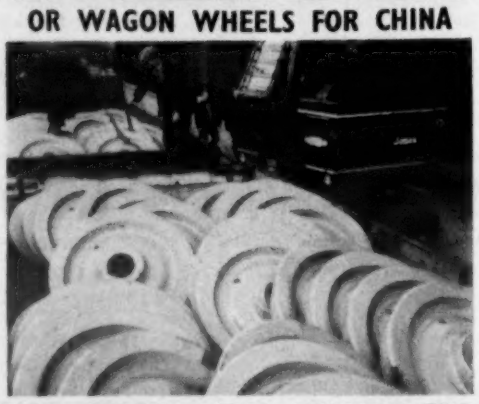


OR WAGON WHEELS FOR CHINA



VIA EXPORT EXPRESS

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